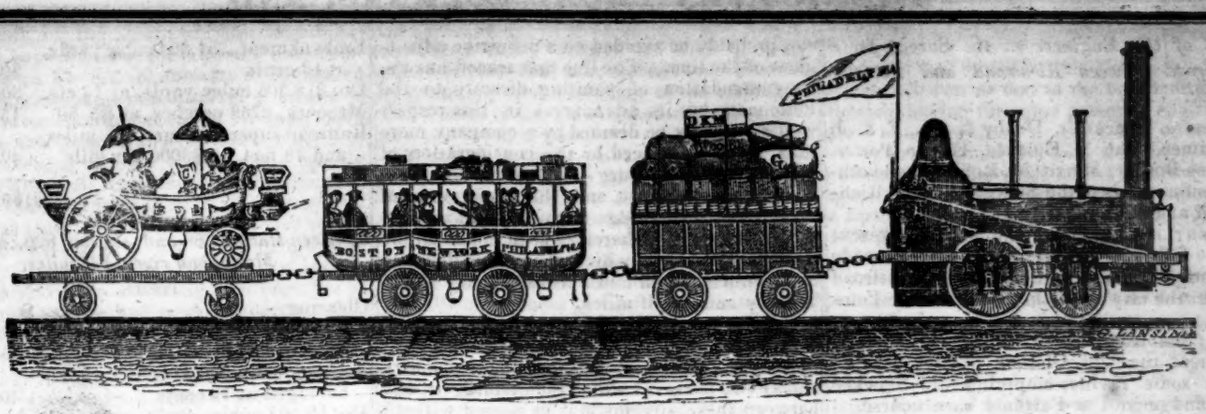


AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, FEBRUARY 22, 1834. [VOLUME III.—No. 7.

CONTENTS:

AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, FEBRUARY 22, 1834.

Railroads in Alabama.—We are highly gratified to learn, as we do from the following extracts, that the inhabitants of *Alabama* are pushing forward their works of internal improvement with a spirit, which, if it does not stimulate those of *older* states to action, will at least, we hope, richly reward those who have invested their funds in an enterprise so creditable and so useful.

Railroad.—We regret to state that the first contract, from this place to Courtland, is not yet completed. It is, however, far advanced, and steadily progressing. We understand that the cars now run within seven or eight miles of Courtland, and that not more than about one-fourth of the work, on this remnant of the contract, remains unfinished.

We have the best assurance that the work will all be completed, by or near the first of October next, the time specified in the contracts.

Operations have already commenced under the new contracts, and upwards of one hundred hands are now at work.—[North Alabamian.]

T Theuscumbia, Courtland, and Decatur Railroad.—We are gratified to learn, by means of a letter received from David Hubbard, Esq. Secretary of the Tuscumbia, Courtland, and Decatur Railroad Company, the following facts in relation to the progress of this noble enterprise. "On yesterday (16th inst.) the Tuscumbia, Courtland, and Decatur Railroad Company let to contract the whole line of the road to Decatur, to be finished by the first day of October next, (1834.) From the anxiety manifested to get contracts, by able and responsible bidders, the company had no difficulty in letting out to the best description of men, and on good terms. No doubt is entertained but that the road will be completed in time for planters above the shoals to get their next crops to market as soon as it can be gathered, without waiting for a tide. But what is of equal importance to the people of Huntsville and Madison county generally, the board of directors, also on yesterday, adopted the following resolution:

'Resolved, That if the right of way can be had, from planters along the line, the Tuscumbia, Courtland, and Decatur Railroad Company will extend their road to Huntsville and have it completed during the next year."—[Huntsville (Ala.) Mercury.]

There can hardly be a doubt, we should think, but that the inhabitants on the line will not only assent, but also, with the inhabitants of Huntsville, give their hearty support to a measure which will so largely contribute to their immediate prosperity.

The Tuscumbia, Courtland, and Decatur Railroad is certainly a measure creditable to those who projected and have thus far prosecuted the work; but we apprehend that the road between the two extremes is a *small* part only of the line of railroad which will ultimately be connected with it. It will be observed, by a reference to the map, that it is in the direct course of a continuance of the South Carolina Railroad to the Mississippi River at Memphis, or some other suitable point—perhaps *Natchez;* and who that has observed the progress of improvements within the last few years, can doubt the ultimate accomplishment of a work so desirable? It will also be intersected by branches from Tennessee, on the north, and from the interior of Alabama on the south. One has already been chartered from Moulton, the county seat of Lawrence county, to connect at some suitable point, probably at Courtland. In short, the Tuscumbia, Courtland, and Decatur Railroad is a *germ* from which many others will spring: a work, therefore, which will do great and lasting credit to those who projected and have thus far prosecuted its accomplishment.

Ithaca and Owego Railroad.—We learn by a letter received in this city, from John Randel, Jr. Esq. the engineer of this road, that on the 13th of the present month, 13 miles of this road were opened for transportation and travel The inclined plane at Ithaca was for the first time used, and successfully. A car loaded with two tons of iron and thirty passengers, passed up the great plane, an elevation of 405 feet, in eight minutes. On the 15th, the road was to have been still further opened to a place beyond Smith's tavern, which is more than half the whole distance to Owego. By the middle of April, if no uncommon event should interfere, the whole line will be finished to that place. All the stone work, bridges, viaducts, and heavy jobs being finished, nothing of consequence remains but to lay the remaining rails. All the materials are on the ground, and the force on the road is at present about 700 men.

We congratulate those gentlemen in New-York and elsewhere, whose unshaken confidence in the work has enabled it to proceed. It has been demonstrated again and again to occupy a most important avenue to trade, and if it only secure the transportation and travel now existing, it will divide an annual interest of from 14 to 21 per cent. There is no mistake about this. The village of Ithaca and its vicinity already pays annually $150,000 toll at Montezuma on merchandize and produce carried upon the canal.

The trade of that region is immense; 140 mills cluster within twelve miles of the village. Ithaca in fact is the key to the trade of the upper counties of the Susquehannah, and distributes salt, plaster, castings, and merchandize, to a great section of country in Pennsylvania. It receives lumber, (the finest that comes to this market,) produce and coal in large quantities, and will furnish an inexhaustible supply of fuel for the furnaces and salt works of our state. It commands the Baltimore, the Philadelphia, and New-York markets, and has an equal chance with the west for those of Canada. And here we may remark, that this portion of the state has arrived at its present prosperity *without* the fostering care of the legislature. While all other sections have from time to time, by expenditures in public works, by liberal endowments to public institutions, and multiplied acts of incorporation, been aided in their upward course, some fatality appears to have attended the applications from this quarter. They have been prejudged, or decided upon without a hearing, or have been overthrown by pitiful intrigues and jealousies unworthy of high minded legislation. The railroad has been made by the enterprise, almost termed folly, of a few individuals, in defiance of the sneers, if not the opposition, of those sagacious characters who always predict the ruin and downfall of every project not of their own creation. The tolls which will be received on these 13 miles of the road, even now, will at once be equal in amount to those received on any road of a similar extent in the United States.—[Albany Daily Advertiser.]

Report of the Engineer on the Survey for a Railroad between Richmond and Potomac Creek.

To Messrs. Lancaster, Denby & Co., F. & J. S. James, John H. Eustace, Edwin Porter, James Bosher, Merrit M. Robinson and others, subscribers to the Survey between Richmond and Potomac Creek:

GENTLEMEN—I have the honor to present you the following report on the surveys made under my direction, with a view to a railroad between the city of Richmond and the Potomac.

The line traced commences on Richmond Hill, near the Old Church. After passing around some ravines emptying into Shockoe creek, and near the Fairfield race course, it crosses, at station 70, the Mechanicsville turnpike; soon after which it descends into the valley of the Chickahominy, which it crosses a short distance above the junction of that stream and the Brooke. After crossing the Chickahominy, it passes around the head waters of the Totapotamoy, to station 247, at which point it crosses the stage road leading from Richmond to the Oaks. A few hundred yards farther it passes the Oaks, and is afterwards traced across some of the branches of the Machumps creek, and in the neighborhood of the road leading from the Oaks to the South Anna bridge. At station 321 it commences descending to the valley of the Pamunkey, which is passed about two hundred yards below the junction of the North and South Anna rivers.

From the valley of the Pamunkey, the line ascends at a graduation of thirty-three feet per mile, through the lands of Williams Carter and Doctor Morris, to the summit between the North Anna and Reedy Swamp. It is thence traced across several branches of Reedy Swamp through the lands of Messrs. Guy, Young, and Duling, to station 539, at which point it commences descending, on an uniform graduation of thirty-five feet per mile, to the valley of the Polecat river.

The summit between the Polecat and the Mattapony is passed with but little difficulty, the excavations and fillings in this distance being very moderate, and the grades, both ascending and descending, not exceeding thirty feet per mile.

From station 626, in the valley of the Mattapony, examinations have been made on two routes. The first line traced crosses the Mattapony a short distance beyond this point, and after passing on table land to the right of this stream, for about two miles, ascends on a graduation of thirty-one feet per mile, to the dividing ground between the Mattapony and Morocosac. Soon after attaining this level, it crosses the stage road between the Bowling Green and Fredericksburg, and is afterwards traced to the right of this, and in the neighborhood of the old court-house road, as far as Quisenbury's, which it passes about three-fourths of a mile to the left. From Quisenbury's it descends along the Ware creek to the Rappahannock flats, which are reached on the lands of Mr. William Taylor. From William Taylor's the line is taken along the flats, on ground generally favorable, to Fredericksburg.

The second line passes along the Mattapony Flats, on a nearly level graduation, to station 254, a few hundred yards above Downer's Bridge; after which it ascends, on a graduation for the greater part of the distance of thirty-two feet per mile, to the dividing ground between the Mattapony and Long Branch. From the summit, at station 174, near the head of Long Branch, it passes down the valley of Long Branch to the Massaponax, which is crossed about two hundred and fifty yards below the mouth of Furnace Run. About one and a half miles beyond this stream, it connects with the line above described.

To both of these lines objections may perhaps be made on local considerations, which can probably be avoided on a definitive adjustment of the line. The line first traced has the recommendation of pointing directly to the Potomac; but its advantages in this respect would probably be deemed by a company more than counterbalanced by the consideration of making Fredericksburg a point in the main line of improvement, and the importance of avoiding a draw bridge at the Rappahannock. The estimate has therefore been made on the line last traced, by which the whole distance between Richmond and Fredericksburg would be sixty and a half miles.

Between the Rappahannock and Potomac, no examinations have been made with instruments, but a reconnoissance of the country shows two passes at which the dividing ground between these streams may be passed without material difficulty. The first of these is on the land of Mr. Pratt, near the head of Muddy creek, where a cut of moderate depth would admit of a line being afterwards taken, along one of the ravines of the Potomac creek, to the present steamboat landing. The second near the head of Lamb's creek would only be available for a line which should terminate on the Potomac, below the mouth of Potomac creek. Such a line would have the advantage of ending at a point which would afford much better water than can be had on the creek, and of course would admit of the use of a much larger class of steamboats and vessels on the Potomac, in connection with the railroad.

PLAN OF CONSTRUCTION AND ESTIMATE.—The principal difficulties on the line would consist of heavy cuts and fillings, and occasionally expensive constructions of masonry, or brick work, in situations where stone cannot be procured. It will probably be found advisable to adopt this substitute the whole distance between the Reedy Swamp and the head of Long Branch.

The superstructure of the railroad would be similar to that adopted on the railroad lately constructed between Petersburgh and the Roanoke, except that white oak rails, plated with iron, are proposed, instead of yellow pine. This last material has been generally made use of on the railroads hitherto constructed in our country; but it has been found too soft and yielding to admit of the use of as heavy engines as it would be advantageous to employ. It is understood that a sufficient quantity of white oak timber may be obtained, on the line of the improvement, to admit of the superstructure in contemplation being executed within the terms of the estimates.

For more convenient consideration the cost of the work between Richmond and Fredericksburg is presented in four divisions, into which the line naturally divides itself.

DIVISION I.

Between the point of commencement and station 139, a short distance beyond the crossing of the Chickahominy, 7 miles.

ITEMS.

Clearing		$ 100 00
Excavation, 119,335 cubic yards, averaged at 10 cents per yard		11,933 50
Embankment, 172,451 cubic yards, at 12 cents		20,694 12
Embankment, 42,266 cubic yards, at 15 cents		6,339 90
Masonry, of bridges and drains, 1763 perches, at $5 per perch		8,815 00
Superstructure of bridges		2,800 00
Railroad superstructure, 7 miles, at $3000 per mile		21,000 00
		$71,682 52

DIVISION II.

Between stations 139 and 388, near the south bank of the Pamunkey, 14 miles and 78 feet.

ITEMS.

Clearing		$ 580 00
Excavation, 227,156 cubic yards, at 10 cents		22,715 60
Do. 220,581 cubic yards, at 13 cts.		28,675 58
Embankment, 251,364 cubic yards, at 12 cents		30,163 68
Do. 218,306 cubic yards, at 14 cts.		30,562 84
Masonry, 2769 perches, at $5 50		15,229 50
Railroad superstructure, 14 miles and 78 feet, at $3000 per mile		42,044 32
		$169,971 47

DIVISION III.

Between station 388 and station 626, near the Mattapony river, 13½ miles.

ITEMS.

Clearing		$ 350 00
Excavation, 500,426 cubic yards, averaged at 11 cents		55,046 86
Embankment, 336,474 cubic yards, averaged at 12 cents		40,376 88
Do. 68,504 cubic yards, averaged at 15 cents		10,275 60
Brick work of Bridges and Culverts.		
807,000 bricks, laid in lime mortar, at $9		7,263 00
Masonry, 2660 perches, at $4 50		11,970 00
Superstructure of bridges		4,800 00
Railroad superstructure, 13½ miles, at $3000 per mile		40,500 00
		$170,582 34

DIVISION IV.

Between station 626 and Fredericksburg, 26 miles and 82 feet.

ITEMS.

Clearing		$ 450 00
Graduation, including drains, 11¾ miles of railroad, along the Mattapony flats, averaged at $2400 per mile		28,000 00
Bridges across South river and Mattapony		6,000 00
Excavation, 242,885 cubic yards, averaged at 10 cents		24,288 50
Embankment, 119,917 cubic yards, averaged at 11 cents		13,190 87
Do. 65,112 cubic yards, averaged at 15 cents		9,766 80
Brick work in Culverts and Drains.		
388,000 bricks, laid in lime mortar, at $9		3,492 00
Masonry, 1910 perches, at $4		7,640 00
Superstructure of bridge at Massaponax		1,600 00
Railroad superstructure, 26 miles and 82 feet, at $3000 per mile		78,046 60
		$172,474 77

SUMMARY.

Division I.		$ 71,682 52
II.		169,971 47
III.		170,582 34
IV.		172,474 77
		$584,711 10
Add for superintendance and contingencies ten per cent.		58,471 11
Probable expenditure for depots, warehouses and water stations, and for locomotive engines, cars and carriages,		120,000 00
Capital stock required for the railroad to Fredericksburg		$763,182 21

As before observed, no survey has been made between Fredericksburg and the Potomac, and an accurate estimate cannot therefore be presented for this portion of the route, a bridge across the Rappahannock would probably cost $20,000; and the distance by the way of Muddy creek, the nearest of the two routes, to the steamboat landing, may be computed at thirteen miles. Supposing the cost of this portion of the line to exceed, somewhat, the average expense of the railroad between Richmond and Fredericksburg, and a similar proportional expenditure to be necessary for locomotives, cars, &c. an increase of capital to the extent of $200,000 would be necessary for the extension of the railroad to the Potomac.

The above aggregates will probably exceed the expectations which have been formed as

to the cost of the work, but objects proportionably large would seem to justify its accomplishment. To the inhabitants of Richmond and Fredericksburg, it will afford a means of speedy intercommunication, by bringing them within a few hours transit of each other: to the intervening country a cheap and speedy transportation of its products, and to the portions of the state trading with Richmond and Fredericksburg, the benefit of improved markets. The execution of the work in question may also be expected in a few years to lead to that of lateral railroads along both branches of the Rappahannock, and in this aspect not only the rich counties at the foot of the Blue Ridge, but the Valley counties of the Shenandoah, Frederick, and Jefferson, seem to be particularly interested in its accomplishment.

But these results, important as they are, appear trivial compared with those which may be expected to ensue from the execution of the proposed work, if it should become the line of northern and southern travel. So far, this has been taken principally by packets plying between New-York and the southern ports. But the lines of railroads now progressing or executed in the northern states will have afforded, within two years from the present time, a steamboat and railroad communication between Boston and the Potomac, and the improvements projected in the south will have equally the effect of accumulating, on our southern border, a large and steadily increasing travel. It can scarcely be the policy of the legislature to direct this travel from the limits of the state, to place it on the bay. Unless this should be done, the proposed work, in connection with the Petersburg railroad, will have the effect of conducting it through the interior of the state, and of affording to the districts of the commonwealth, through which it will pass, as well as to the towns of Richmond, Fredericksburg and Petersburg, all the benefit which must necessarily result from positions on the great line of national thoroughfare.

That the work, under these circumstances, must be productive, there can be no doubt. It would seem, if the above views be correct, to be equally clear, that no work which has been projected in Virginia can be, in proportion to the expenditure which will be required for its completion, of more importance to the commonwealth, or have higher claims on its consideration and patronage. All which is respectfully submitted. MONCURE ROBINSON, C. E.

Richmond, January 4th, 1834.

[*From the London Courier, 14th Nov.*]

It may be said of railroad projects, as it is sometimes said of other things, that "it never rains but it pours." No matter how far apart any two places may be, or whether the traffic between them be great or small, we are assured that to unite them by a railroad will be a highly profitable concern. We are further assured, that it is no great matter whether the line between them be level or not, seeing it has been opportunely discovered that an undulating line is preferable to one that is level. The success of Burns turned the heads of thousands of his countrymen, who fancied that because they could string together a few doggrel verses, they were rivalling the wit, and simplicity, and pathos, of the Ayrshire bard. The success of the Manchester and Liverpool Railroad Company seems to have had a similar influence over the proprietors and speculators of this end of the island. But we are afraid there are not many of the newly-fledged schemes destined to make a nearer approach, in point of productiveness, to that prosperous concern, than the mass of his competitors did to Burns. Those, to whom the interest of their capital is any object would do well to pause and reflect seriously what they are about before embarking in any one of these schemes. Those who can afford to promote a public object, at the expense of their subscriptions, or who expect to gain more indirectly by the construction of the railroads than the amount of their shares, are persons who may safely engage in such projects. Other parties will best consult their interests by confining their patronage to the risking of their bodies in the "fast coaches," when once they are set in motion.

It would be quite as logical to infer that because a £50 share in the Trent and Mersey Canal is worth £650, a share in the Croydon Canal should fetch a corresponding price, as it is to infer, from the success of the Manchester and Liverpool railroad, the success of the numberless schemes of the sort now before the public. We affirm, without fear of contradiction, that there are not within the British Empire any two places, 30 miles distant, between which a railroad can be made with half the chances of success as between Manchester and Liverpool. The latter is, in fact, the port of Manchester; and while the latter is the centre of the cotton manufacturing district, there is, within the single hundred in which it is situated, a population of 650,000! The intercourse between Manchester and Liverpool, before the railroad was so much as thought of, was vastly greater than that between any other two places in the Kingdom; and it must necessarily continue to increase, not only with the increased facilities of communication, but with the rapid growth of population, manufactures, and commerce, in that part of the country. In fact, looking at the Manchester and Liverpool railroad in an economical point of view, its moderate success is the only very striking feature about it. On the 23d of January last, the directors declared a half-yearly dividend at the rate of £4 4s. per cent. This amounted to £33,468 15s., leaving a surplus of only £693! In most concerns with which we are acquainted, this would be considered very improvident management. The railroad carriages, &c., have cost little less than a million; and they are very far certainly from being particularly durable. It is affirmed, no doubt, that the repairs which are constantly being made on the road and carriages, keep them uniformly up to the desired degree of goodness; and that, therefore, it is unnecessary to accumulate a sinking fund. But it is alleged by others that this not really the case, and that at no very remote period a very large additional outlay will be required. Whether this be so we cannot pretend to affirm. But, taking the facts as they stand, and setting them in the most favorable point of view, they give slender encouragement to the projects now on foot. Here we have a railroad 30 miles in length, between two places having the greatest intercourse by far of any two in the empire, and because it pays eight per cent, we are told that we may all become as rich as Crœsus by subscribing to railroads three, four, and five times the length, between places that have not a third, a fourth, or a fifth part of the intercourse between Manchester and Liverpool! We like quick travelling, and nothing would give us greater pleasure than to see the country intersected by railroads; and we do not mean to deny, that in a few cases they may be constructed with a view to the profit of the projectors or shareholders. But our love of rapid motion is not greater than our dislike of quackery and humbug. Let no one, who expects to profit by such schemes, put his faith in mere prospectuses.

IMPORTANT DISCOVERY.—A gentleman in this town believes he has discovered important improvements on the Burdenian plan of constructing steamboats, which he conceives will eventually supersede every other mode now in use. The improvements, it is thought, will combine every advantage of the Burden plan as to speed, and 1st, a great increase of strength—2d, a much less draft of water—3d, an adaptation to lake or river navigation, in deep, shallow, calm, rapid, or rough water—4th, an adaptation to the conveyance of passengers, or both freight and passengers, affording abundant room for the stowage of freight, which Mr. Burden's plan does not embrace—5th, an increased facility in turning round—6th, a great diminution of cost in the construction. It is supposed that a boat on this plan may be built, which will run as fast as the boat built by Mr. Burden, having the same power of engine, and draw not more than one and a half or two feet of water. Should the sanguine expectations entertained of the value of the improvements, upon further consideration, prove well founded, a further notice will probably appear.—[Brockville Recorder.]

ANOTHER STEAMBOAT.—This is emphatically an age of steam inventions. New steamboats, steam-boilers, and steam-engines, greet us on every hand; and in this neighborhood there seems to be an astonishing fecundity in this respect.

Mr. Burden's wonder was long ago duly announced, and intelligence of it has been carried by the four winds to the four quarters of the globe. Not long since, some unknown friend sent us a paper printed in Ireland, containing an account of Mr. Burden's invention, originally given in this paper.

We have also noticed, upon the authority of others, Mr. Langdon's invention, and owe him an apology (which we find in the multiplied duties of the conductor of a daily paper), that we have not yet embraced his invitation to examine his boat.

Our object now is, as chroniclers in this region, to inform the public of another invention or model of a steamboat, which, being exhibited in this city, we had the pleasure of seeing on Tuesday. The plan is approved of by several prominent individuals in this city, who, besides, are connected with the present steamboat association, and who, we understand, design, (such is their confidence of its merits,) at no distant day, to reduce the invention to the test of experiment.

The model, which is remarkable for its simplicity and the absence of *extra* and unnecessary incumbrances, represents a boat 250 feet long, and 50 feet wide, composed or built upon two hulls (each 250 feet long) lying parallel to each other, and 20 feet apart in the centre.

The hulls are designed to be 10 feet deep, and 11 wide, with perpendicular sides, so that, at the same time they serve to buoy the boat, they supply two long and spacious cabins; which being below and not above the deck, will obviate the hindrances to speed, which boats having their cabins and a load of fixtures on deck, in certain states of wind and weather, sometimes experience.

The deck is arched, and in such a way, if not to present the full resistance and power of the perfect arch to the weight that may be placed upon it, yet so as in a great degree to strengthen the boat, and render it fully adequate to the uses for which it is designed.

The sides and bottom of the hulls, where they come in contact with the water, are constructed on a line purely designed to diminish resistance, and forming the segment of a circle of an immense diameter.

The boat is to be propelled by a single paddle-wheel of great power, revolving in the centre between the hulls.

The inventor is a young man of this city, of promise and ingenuity, and the present evidence of it is not the first the public has to judge from. His profession and calling have given him opportunies of observation, and of studying the subject of improvements in the application and use of steam and steamboats, which few others have had, and which, with a laudable ambition, he has endeavored to improve for the benefit of the public, and we hope of himself also.

It is also intended to introduce a coal-boiler, constructed on a new principle, the effect of which, it is assumed by those acquainted with the subject, (which we profess not to be,) will be the saving of at least 50 per cent. in the expense of fuel.

To construct a boat 250 feet long, it is estimated will cost $30,000.

The hulls will be framed upon light but strong timbers, upon which are to be fastened successive layers of thin tough oak plank, or boards. The first layer to run horizontally lengthwise the boat; the second crosswise; the third crosswise diagonally; and the fourth lengthwise; the whole fastened or riveted together, by iron nails or rivets, and to constitute a thickness not exceeding four inches: forming, in short, a kind of medium between boats built on the plan of Mr Annesley and common boat building.—[Troy Press.]

RAILROAD MEETING.—At a large and respectable meeting of citizens, from the several towns of Orange county, held at the Orange Hotel, in the village of Newburgh, on the 11th February, 1834, for the purpose of considering the propriety of petitioning the legislature for aid in the construction of the New-York and Erie Railroad, the hon. Nathaniel Jones, of Warwick, was elected President; Abraham M. Smith, Esq. of Newburgh, was chosen Vice-President, and Edward Blake, of Montgomery, and Robert Sly, of New-Windsor, were appointed Secretaries.

David Ruggles, Esq., after addressing the meeting, moved that a committee be appointed to draft a memorial to the legislature, upon the subject for the consideration of which the meeting was assembled. The meeting was also addressed by Isaac R. Van Duzer, Samuel J. Wilkin, Charles Borland, John Hallock, Jun., William W. Brooks, and Abraham Crist, Esqrs. upon the importance to the state of New-York of the subject under consideration; whereupon, David Ruggles, of Newburgh, Isaac R. Van Duzer, of Goshen, Charles Borland, of Montgomery, William W. Brooks, of Blooming-Grove, John B. Booth, of Goshen, John Hallock, Jun., of Minisink, and Abraham Crist, of Walden, were appointed a committee to prepare a memorial to the legislature, for their aid and encouragement in constructing the said railroad.

The committee having consulted together, reported a memorial to the legislature, which was unanimously adopted.

RAILROADS IN GEORGIA.—Companies have been incorporated by the Legislature of Georgia to construct three Railroads in that state; one from Savannah to Macon; one from Macon to Forsyth, and one from Augusta westwardly.—It is required by these charters that these roads shall be commenced within two years of the passage of the act, and shall be completed within six years thereafter.

BUSINESS OF THE CANAL.—We have been politely furnished with the following return by Gen. Humphrey, canal collector in this city:

The whole quantity of down freight upon which toll is charged by weight, that was conveyed on the New-York canals to Albany, in 1833, amounts to one hundred and fifty-two thousand nine hundred and thirty-five tons, at 2000 pounds per ton, viz.:

Barrels of flour	734,133
" ashes	22,922
" provisions	13,489
" whiskey	19,908
Hogsheads do.	873
Bushels of salt	17,116
" wheat	293,504
" coarse grain	122,944
" barley	257,252
Boxes of glass	2,187

Also, the following, upon which toll is not charged by the ton:

Cords of wood	20,960
Feet of timber	74,350
" lumber	55,333,547
M. of shingles	74,350

There were 68,321 tons of merchandise, furniture and sundries, sent up the canal from Albany.

The whole amount of tolls received by the collector at Albany is $323,689 88, making an increase of $87,053 56 over the receipts of the last year.

Number of boats arrived and cleared, 16,884.

PRODUCE AND COAL IN PHILADELPHIA.—The following statement exhibits the number of bushels of grain, salt, (coastwise,) and coal, discharged at the port of Philadelphia for the years

	1832.	1833.
Corn.....bushels	631,098½	628,654
Wheat.....ditto	232,831½	156,255½
Rye.....ditto	39,608	77,302½
Barley.....ditto	55,508½	45,760½
Oats.....ditto	95,329	93,434½
Flaxseed.....ditto	5,204½	9,890½
Beans and Peas....ditto	1,414½	378
Clover-seed.....ditto	575	—
Salt.....ditto	114,378	63,971½
Coal.....ditto	142,754	180,145

Flour Inspection.—Amount of flour and meal inspected for the port of Philadelphia, for the year ending 31st Dec. 1833:

Wheat Flour	378,590 barrels.
Ditto	22,725 hf. ditto.
Rye Flour	40,011 barrels.
Corn Meal	40,415 ditto.
Ditto	7,549 hhds.
Middlings	2,537 barrels.

Inspection of Salt Provisions, in the city and county of Philadelphia, for the year 1833:

3,123 barrels of beef.
508 hf. bbls ditto.
6,765 hhds. of pork.
69 hf. bbls. ditto.
53 bbls. of herring.

10,518.

WONDERS OF ART.—You behold a majestic vessel bounding over the billows from the other side of the globe; easily fashioned to float with safety over the bottomless sea; to spread out her broad wings, and catch the midnight breeze, guided by a slow drowsy sailor at the helm, with two or three companions reclining listlessly on the deck, gazing into the depths of the starry heavens. The commander of this vessel, not surpassing thousands of his brethren in intelligence and skill, knows how, by pointing his glass at the heavens, and taking an observation of the stars, and turning over the leaves of his "Practical Navigator," and making a few figures on his slate, to tell the spot which his vessel has reached on the trackless sea; and he can also tell it by means of a steel spring and a few brass wheels, put together in the shape of a chronometer. The glass with which he brings the heavens down to the earth, and by which he measures the twenty-one thousand six hundredth part of their circuit, is made of a quantity of flint, sand, and alkali—coarse opaque substances, which he has melted together into the beautiful medium, which excludes the air and the rain and admits the light,—by means of which he can count the orders of animated nature in a dew-drop, and measure the depth of the vallies in the moon. He has, running up and down his main mast, an iron chain, fabricated at home, by a wonderful succession of mechanical contrivances, out of a rock brought from deep caverns in the earth, and which has the power of conducting the lightning harmlessly down the sides of the vessel into the deep. He does not creep timidly along from headland to headland, nor guide his course along a narrow sea, by the north star; but he launches bravely on the pathless and bottomless deep, and carries about with him in a box a faithful little pilot, who watches when the eye of man droops with fatigue, a small and patient steersman, whom darkness does not blind, nor the storm drive from his post, and who points from the other side of the globe,—through the convex earth,—to the steady pole. If he falls in with a pirate he does not wait to repel him, hand to hand; but he puts into a mighty engine a handful of dark powder, into which he has condensed an immense quantity of elastic air, and which, when it is touched by a spark of fire, will instantly expand into its original velume, and drive an artificial thunderbolt before it, against the distant enemy. When he meets another similar vessel on the sea, homeward bound from a like excursion to his own, he makes a few black marks on a piece of paper and sends it home, a distance of ten thousand miles; and thereby speaks to his employer, to his family, and his friends, as distinctly and significantly as if they were seated by his side. At the cost of half the labor with which the savage procures himself the skin of a wild beast, to cover his nakedness, this child of civilized life has provided himself with the most substantial, curious, and convenient clothing, textures and tissues of wool, cotton, linen, and silk, the contributions of the four quarters of the globe, and of every kingdom of nature. To fill a vacant hour, or dispel a gathering cloud from his spirits, he has curious instruments of music, which speak another language of new and strange significance to his heart; which make his veins thrill, and his eyes overflow with tears, without the utterance of a word—and with one sweet succession of harmonious sounds, send his heart back, over the waste of waters, to the distant home, where his wife and his children sit around the fireside, trembling at the thought that the storm which beats upon the windows, may, perhaps overtake their beloved voyager on the distant seas. And in his cabin, he has a library of volumes—the strange production of a machine of almost magical powers—which, as he turns over their leaves, enable him to converse with the great and good of every clime and age, and which even repeat to him, in audible notes, the laws of his God, and the promise of his Saviour, and point out to him that happy land which he hopes to reach when his flag is struck, and his sails are furled, and the voyage of life is over.—[E. Everett.]

RAIN WATER.—In our country there falls rain, including melted snow, to the average depth of 35 inches. On a surface forty feet square, there falls yearly 34,909 wine gallons; and if all this were secured in cisterns, there would be nearly one hundred gallons for every day's consumption, or about three barrels. This water, if well preserved, would be the very purest and best for most domestic purposes. The horse and the cow prefer rain water to pump or well water; and though it would not be entirely governed by their decision, yet great respect is due to their judgment in such matters. The water of many wells is tinctured in such a way as to make it less fit for a solvent; and it does not so perfectly combine with nutritious substances, to form kyle, and nourish the human system. They who live in situations where water is not easily procured from the ground, may be told that the purest water is descending around them; and if they will only be at the necessary expense to secure this gift of heaven, they may provide an abundant supply. On such reservoirs the inhabitants of Palestine placed much dependence; and it is a merciful appointment of God, that in warm countries, where the greatest supply of water is needed, the most rain descends. We may yet find good capacious cisterns, of brick or stone, and Roman cement, economical additions to our do-

mestic conveniences. A cistern ten feet square, and ten feet deep, would contain 118 hogsheads of 63 wine gallons each, and would secure to most families a constant supply of water.—[Scientific Tracts and Lyceums.]

THE CHEAP TRANSPORTATION OF BOOKS AND PERIODICALS.—The present state of society demands a cheap system of conveyance for the diffusion of knowledge. The post-office system is too expensive. On this system conveyance must be more expensive, from its rapidity, than is necessary for all purposes. A vast number of publications now issued are not required to be transmitted with great speed. As mail stages now usually run, they carry a load of one thousand pounds at three times the expense of conveying the same load at a moderate rate. "In England," says the Scientific Tract on Railroads, "every coach on the best roads that runs for twenty-four hours, at nine miles per hour, drawing not over two tons, requires no less than 180 horses, or ninety each way. Less than 12 horses would carry the same weight for the same time, at two and a half miles per hour." In the mail stages of our country, weighing about a ton, less than a ton of passengers and baggage is usually carried. To transport this load at the rate ordinarily travelled, the horses are changed every twelve miles. To carry the load, therefore, thirty-six miles, twelve horses are needed. At the rate of four miles an hour, four horses would transport this load in waggons. At a moderate speed, therefore, a load of magazines and books would be conveyed at one third the cost of transportation by rapid mail stages. But there is no advantage in my having many of the periodicals I receive by a rapid conveyance. A system of baggage waggons, transporting small articles over the country at a cheap rate, would, therefore, greatly facilitate the diffusion of knowledge. I wish to take the Biblical Repository, and find that four numbers weigh two pounds and ten ounces. I live rather more than 100 miles from Boston; and the postage of the whole, comprising 50 sheets, would be $1.25; while the freight, at the rate at which goods are commonly transported in waggons, would be a little less than 2½ cents. The postage of forty numbers of the Temperance Recorder would be 60 cents; while the freight of the whole 40, if the papers were dried, and thus made light, would not be more than one cent. When the post-office was established there did not exist such a periodical literature as distinguishes the present age; and therefore, the United States did not provide for such a conveyance of packets as is now needed. The law now in force, passed March, 1827, enacts, "That no person, other than the Postmaster General, or his authorized agents, shall set up any foot or horse post for the conveyance of letters and packets upon any post road, which is or may be established as such by law." This law forbids such a system of conveyance of parcels as is contemplated in this article, unless it should be established by the post-office department. But if it should not be thus established, it may be authorised by act of Congress. Why should booksellers and printers, and publishers, be shackled in their business more than other classes of the community? A vast amount of the literature of the country is now periodical. We have our weeklies, our monthlies, our quarterlies, and our annuals, without number. We have our libraries too; the Christian's Library, the Select Circulating Library, and a variety of others. It is desirable that there should be a regular and cheap conveyance of such books. This difficulty of distributing periodicals over the country is of the nature of a heavy duty on them. The postage on a periodical, which does not convey news, and needs not to be carried post haste, now greatly increases its cost, and checks its circulation. If shoes, and hats, and other articles of manufacture, could be conveyed only by government lines, at the cost of 33 per cent. on their value, the manufacturers would be exceedingly embarrassed; and the public, too, would be injured beyond calculation, especially if the manufacture could be carried on only in one place in a whole county, or in a whole state, as is the case with books and periodicals.—[Scientific Tracts and Lyceums.]

THE FLOATING GARDENS OF CASHMERE.—The city of Cashmere, being the capital of the province of that name in Asia, is situated in the midst of numerous lakes, connected with each other, and with the river Vedusta, by canals, separated by narrow lines and insulated plots of ground. Upon these lakes are floating gardens, cut off generally from the body of the lake by a belt of reeds; the cultivation of which is not only very singular, but highly profitable, and worthy of imitation in Europe as a resource for raising food for man. The second number of the 'Journal of the Geographical Society contains a notice of the Natural Productions and Agriculture of Cashmere, from which the following account is compiled:

The city of Cashmere is subject to considerable inundations, which have become annually more frequent, through the neglect of the government in not checking the accumulation of weeds and mud, which diminish the depth, and consequently increase the surface of the lakes. This has suggested the expediency of a floating support, by which vegetables are cultivated in safety, deriving as much moisture as is beneficial without the risk of being destroyed. Various aquatic plants spring from the bottom of the lakes, as water lilies, sedges, reeds, &c.; and as the boats which traverse those waters take generally the shortest lines they can pursue to their destination, the lakes are in some parts cut into avenues, as it were, separated by beds of sedges and reeds. Here the farmer establishes his cucumber and melon floats by cutting off the roots of the aquatic plants about two feet under water, so that they completely lose all connection with the bottom of the lake, but retain their situation in respect to each other. When thus detached from the soil, they are pressed into somewhat closer contact, and formed into long beds of about two yards breadth. The heads of the sedges, reeds, and other plants of the float, are next cut off, and laid upon its surface, and covered with a thin coat of mud, which, at first interrupted in its descent, gradually sinks into the mass of matted stalks. The bed floats, but is kept in its place by a stake of willow driven through it at each end, which admits of its rising and falling in accommodation to the rise and fall of the water. By means of a long pole thrust among the reeds, at the bottom of the lake, from the side of a boat, and turned round several times, a quantity of plants are torn off from the bottom, and carried in the boat to the platform, where the weeds are twisted into conical mounds, about two feet in diameter at their base, and of the same height, terminating at the top in a hollow, which is filled with fresh soft mud, and sometimes wood ashes. The farmer has in preparation a number of cucumber and melon plants, raised under mats, and of these, when they have four leaves, he places three plants in the basin of every cone or mound, of which a double row runs along the edge of every bed, at about two feet distance from each other. No further care is necessary except that of collecting the fruit, and the expense of preparing the platforms and cones is very trifling. Mr. Moorcroft traversed about fifty acres of these floating gardens, growing cucumbers and melons, and saw not above half a dozen unhealthy plants; and he says, he never saw in the cucumber and melon grounds, in the vicinity of populous cities in Europe or in Asia, so large an expanse of plant in a state of equal health or luxuriance of growth. The general depth of the floating beds is about two feet, and some of them are seven feet broad. The season lasts for three months and a half, beginning in June. From the first setting of the fruit to the time of pulling, seven or eight days are the ordinary period. Thirty full-sized fruit from each plant, or from ninety to a hundred from each cone, are the average crops. The seed of the melon is brought annually from Baltistan, and the first year yields fruit of from four to ten pounds each in weight; but if the seed be re-sown, the produce of the second year exceeds not from two to three pounds. Unless when eaten to great excess the melon produces no disorders, and it is remarked that healthy people who live upon this fruit during the season become very speedily fat; and the effect upon horses fed upon this fruit is reported to be the same. In the early part of the season, cucumbers of full size sell at the rate of about three for a piece of coin of the value of a halfpenny; but as the weather becomes hotter, and the plants get into full bearing, ten, fifteen, and even twenty, are purchased for this price. It is calculated that every cone yields a money return of about eighteen pence. Allowing sixpence for labor of every description, and including also the tax, the clear profit is a shilling for every two square yards. The yield of the melon is numerically less, but the return of profit is at least equal. No other vegetables are raised upon the spaces between the cones, although Mr. Moorcroft thinks that onions, cresses, and other useful vegetables, might be raised upon them; and water-mint grows spontaneously upon the floats.

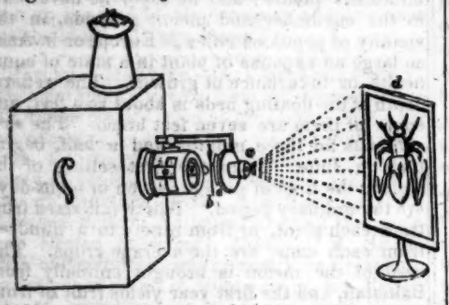
Cashmere, or Cassimere, is one of the northern provinces of India within the Ganges. It is surrounded by mountains, and from its beauty and fertility has been called the Paradise of the Indies. It contains upwards of 100,000 villages, is well stocked with cattle and game, and is said to be unmolested by beasts of prey. The people are ingenious, and resemble the Europeans in their persons, and the women are fair and tall. The famous Cashmere shawls derive their name from this country, though at present the supply that actually comes from it is comparatively small.

WHITE MONKEY.—A letter from Ramree of the 15th April, 1827, makes mention of a perfectly white monkey that had been caught there. The hair on the animal's body was white, curly, and soft as silk, and excited great wonder and admiration among the natives. They represented that such a creature had never but once, to their knowledge, been seen in those parts, and that the king of Ava sent down a golden cage, with a host of people, to escort the animal to his presence, and expended besides 20,000 rupees in sacrifices and public rejoicings, auguring from the arrival of the extraordinary stranger, the most happy presages of good fortune. The monkey brought to our correspondent was one of the same description, but unfortunately it was too young and tender an age when caught. A Burmese woman, who was nursing an infant of her own, requested permission to suckle it, and fairly divided her maternal attention between the two. Pug lived in apparent good health and spirits for six days, but whether it was that its nursing disagreed with it, or that it was naturally very delicate, it died on the seventh day.—[Mr. E. G. Ballard, Islington, in the Field Naturalist's Magazine, No. 9.]

On the Microscope—Method of Constructing, &c. [From Partington's British Cyclopædia.]

[Continued from page 71.]

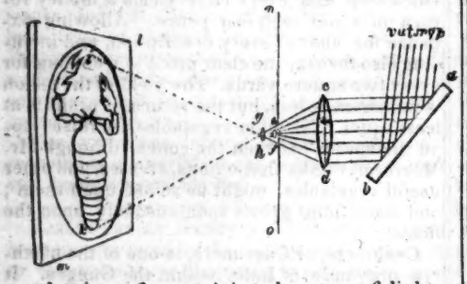
Another still more simple mode of effecting the same object is shown beneath:



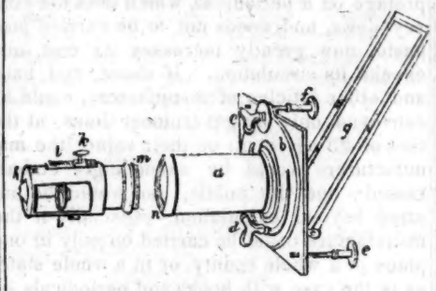
The lantern is provided with a sliding tube for the introduction of the objects to be magnified. The moveable lenses are shown at *a*. Other objects differing in their character may be placed in the forceps, *b*, attached to the sliding frame by the plate *c*. A plate of ground glass, shown at *d*, serves to receive the figure of the object.

The mode of constructing the *solar microscope* may now be illustrated.

It is shown in its simplest form in the engraving below, in which *a b* is the diagonal mirror for receiving the rays of light, *p q r s t u v*. They are reflected by the polished surface, and thrown on the lens *c d*. Within the focus, at *e f*, is placed any transparent object to be magnified, and the image thus illuminated passes through the lens *g h*. The size of the magnified figure, *i k*, will depend on the distance the instrument is placed from the wall *l m*. The room should be darkened, which is usually effected by employing a large shutter at *n o*. Mr. Baker, speaking of this instrument, says, "that it has conveniences attending it which no other microscope can have: for the weakest eyes may use it without the least straining or fatigue. Numbers of people together may view any object at the same time, and by pointing to the particular parts thereof, and discoursing on what lies before them, may be able better to understand one another, and more likely to find out the truth, than in other microscopes, where they must peep one after another, and perhaps see the object neither in the same light nor in the same position. Those, also, who have no skill in drawing, may by this contrivance easily sketch out the exact figure of any object they have a mind to preserve a picture of, since they need only fasten a paper on the screen, and trace it out thereon, either with a pen or pencil, as it appears before them. It is worth the while of those who are desirous of taking many draughts in this way, to get a frame, in which a sheet of paper may be placed or taken out at pleasure; for, if the paper be single, the image of an object will be seen almost as plainly on the back as on the fore side; and, by standing behind the screen, the shade of the hand will not obstruct the light in drawing, as it must in some degree when one stands before it."



A valuable solar microscope of the most perfect form is annexed.



The square plate *b c d* is attached to the window-shutter by the screws *e f*. The glass plate *g* is mounted in a brass frame, and may be elevated or depressed by a screw at *d*. A rotatory motion is communicated by a pinion and handle at *c*, which acts on a large wheel concealed by the square plate. The first lens is placed in the tube *a*, immediately adjoining the mirror. Another tube *m* is attached by a screw at *n*, and contains two small lenses, and the rack-work, *k l*, for adjusting the focus of the instrument. The objects are introduced at *i*; those best fitted for exhibition are the wings of insects, and the cuttings of wood. When glasses of high power are employed at *h*, they are now constructed on the achromatic principle.

We may now proceed to furnish our readers with some necessary particulars respecting the method of using microscopes. On this, Mr. Adams, in his *Essay on the Microscope*, has been very copious; with a view, as he informs us, to remove the common complaint made by Mr. Baker, "that many of those who purchase microscopes are so little acquainted with their general and extensive usefulness, and so much at a loss for objects to examine by them, that after diverting their friends some few times with what they find in the sliders which generally accompany the instrument, or perhaps with two or three common objects, the microscope is laid aside as of little further value; whereas, no instrument has yet appeared in the world capable of affording so constant, various, and satisfactory an entertainment to the mind."

In using the microscope there are three things necessary to be considered. 1. The preparation and adjustment of the instrument itself. 2. The proper quantity of light, and the best method of adapting it to the object. 3. The method of preparing the objects, so that their texture may be properly understood.

With regard to the microscope itself, the first thing necessary to be examined is, whether the glasses be clean or not: if they are not so, they must be wiped with a piece of soft leather, taking care not to soil them afterwards with the fingers; and, in replacing them, care must be taken not to place them in an oblique direction. We must likewise be careful not to let the breath fall upon the glasses, nor to hold that part of the body of the instrument where the glasses are placed with a warm hand; because the moisture thus expelled by the heat from the metal will condense upon the glass, and prevent the object from being distinctly seen. The object should be brought as near the centre of the field of view as possible, for there only will it be exhibited in the greatest perfection. The eye should be moved up and down from the eye-glass of a compound microscope, till the situation is found where the largest field and most distinct view of the object are to be had, but every person ought to adjust the microscope to his own eye, and not depend upon the situation it was placed in by another. A small magnifying power should always be begun with, by which means the observer will best obtain an exact idea of the situation and connection of the whole, and will of consequence be less liable to form any erroneous opinion, when the parts are viewed separately by a lens of greater power. Objects should also be examined first in their most natural position; for, if this be not attended to, we shall be apt to form very erroneous ideas of the structure of the whole, as well as of the connection and use of the parts. A living animal ought to be as little hurt or discomposed as possible. From viewing an object properly we may acquire a knowledge of its nature; but this cannot be done without an extensive knowledge of the subject, much patience and many experiments; as in a great number of cases the images will resemble each other, though derived from very different substances. Mr. Baker, therefore, advises us not to form an opinion too suddenly after viewing a microscopical object; nor to draw our inferences till after repeated experiment and examinations of the objects in many different lights and positions; to pass no judgment upon things extended by force, or contracted by dryness, or in any manner out of a natural state, without making suitable allowances. The true color of objects cannot be properly determined by very great magnifiers; for, as the pores and interstices of an object are enlarged according to the magnifying power of the glasses made use of, the component particles of its substance will appear separated many thousand times further asunder than they do to the naked eye: hence the reflection of the light from these particles will be very different, and exhibit different colors. It is likewise somewhat difficult to observe opaque objects; and as the apertures of the larger magnifiers are but small, they are not proper for the purpose. If an object be so very opaque that no light will pass through it, as much as possible must be thrown upon the upper surface of it. Some consideration is likewise necessary in forming a judgment of the motion of living creatures, or even of fluids, when seen through the microscope; for, as the moving body, and the space wherein it moves, are magnified, the motion will also be increased.

On the management of the light depends, in a great measure, the distinctness of the vision; and as, in order to have this in the greatest perfection, we must adapt the quantity of light to the nature of the object, and the focus of the magnifier, it is therefore necessary to view it in various degrees of light. In some objects it is difficult to distinguish between a prominence and a depression, a shadow and a black stain; or between a reflection of light and whiteness, which is particularly observable in the eye of the libella, and other flies, all of these

appearing very different in one position from what they do in another. The brightness of an object likewise depends on the quantity of light, the distinctness of vision, and on regulating the quantity to the object; for one will be in a manner lost in a quantity of light scarcely sufficient to render another visible.

There are various ways in which a strong light may be thrown upon objects, as by means of the sun and a convex lens. For this purpose the microscope is to be placed about three feet from a southern window; then take a deep convex lens, mounted on a semi-circle and stand, so that its position may easily be varied; place this lens between the object and the window, so that it may collect a considerable number of rays, and refract them on the object or the mirror of the microscope. If the light thus collected from the sun be too powerful, it may be lessened by placing a piece of oiled paper, or a piece of glass slightly ground, between the object and lens. Thus a proper degree of light may be obtained, and diffused equally over the surface of an object, a circumstance which ought to be particularly attended to; for if the light be thrown irregularly upon it, no distinct view can be obtained.

On account of the sun's motion, and the variable state of the atmosphere, solar observations are rendered both tedious and inconvenient, so that it may be advisable for the observer to be furnished with a large tin lantern, formed something like the common magic lantern, capable of containing an argand lamp. There ought to be an aperture in the front of the lantern, which may be moved up and down, and be capable of holding a lens, by which means a pleasant and uniform as well as strong light may easily be obtained. The lamp should likewise move on a rod, so that it may be easily raised or depressed. A weak light is best fitted for viewing many transparent objects, among which we may reckon the prepared eyes of flies, as well as the animalculæ in fluids. The quantity of light from a lamp or candle may be lessened by removing the microscope to a greater distance from them, or by diminishing the strength of the light which falls upon the objects. This may very conveniently be done by pieces of black paper with circular apertures of different sizes, and placing a larger or smaller one upon the reflecting mirror, as occasion may require. The light of a lamp or candle is generally better for viewing microscopic objects than day-light, it being more easy to modify the former than the latter, and to throw it upon the object with different degrees of intensity.

With regard to the preparation of objects, Swammerdam has, in that respect, excelled almost all other investigators who either preceded or have succeeded him. He was so assiduous and indefatigable, that neither difficulty nor disappointment could make the least impression on him; and he never abandoned the pursuit of any object until he had obtained a satisfactory acquaintance with it. Unfortunately, however, the methods he made use of in preparing his objects for the microscope are now entirely unknown.

For dissecting *small insects*, Swammerdam had a brass table, to which were attached two brass arms, moveable at pleasure. The upper part of each of these vertical arms was constructed in such a manner as to have a slow vertical motion, by which means the operator could readily alter their height. One of these arms was to hold the minute objects, and the other to apply the microscope.

The lenses of Swammerdam's microscopes were of various sizes as well as foci. His observations were always begun with the smallest magnifiers, from which he proceeded by progressive steps to the greatest.

The minute scales or feathers which cover the wings of moths or butterflies afford very beautiful objects for the microscope. Those from one part of the wing frequently differ in shape from such as are taken from other parts; and near the thorax, shoulder, and on the fringes of the wings, we generally meet with hair instead of scales. The whole may be brushed off the wing upon a piece of paper, by means of a camel's hair pencil; after which the hairs can be separated, with the assistance of a common magnifying glass.

Great difficulty is experienced in dissecting properly the proboscis of insects, such as that of the gnat, and the experiment must be repeated a great number of times before the structure and situation of the parts can be thoroughly investigated, as the observer will frequently discover in one what he could not in another. The *collector of the bee*, which forms an exceedingly curious object, ought to be carefully washed in spirit of turpentine, by which means it will be freed from the unctuous matter adhering to it; when dry, it is again to be washed with a camel's hair pencil, to disengage and bring forward the small hairs which form part of its microscopic beauty. The best method of preparing the stings of insects, which are in danger of being broken, from their hardness, is to soak the case and the rest of the apparatus for some time in spirit of wine or turpentine; then lay them on a piece of paper, and with a blunt knife draw out the sting, holding the sheath with the nail of the finger, or any other blunt instrument; but great care is necessary to preserve the feelers, which, when cleaned, add much to the beauty of the object. The *beard* of the lepas antifera is to be soaked in clean soft water, frequently brushing it while wet with a camel's hair pencil; after it is dried, the brushing must be repeated with a dry pencil, to disengage and separate the hairs, which are apt to adhere together.

The eyes of insects in general form very beautiful and curious objects. Those of the libellula and other flies, as well as of the lobster, &c. must be cleaned from the blood, &c. after which they should be soaked in water for some days: one or two skins are then to be separated from the eye, which would be otherwise too opaque and confused; but some care is requisite in this operation, for, if the skin be rendered too thin, it is impossible to form a proper idea of the organization of the part. In some substances, however, the organization is such that by altering the texture of the part, we destroy the objects which we wish to observe. Of this sort are the nerves, tendons, and muscular fibres, many of which are viewed to most advantage when floating in some transparent fluid. Thus very few of the muscular fibres can be discovered when we attempt to view them in the open air, though great numbers may be seen if they be placed in water or oil. By viewing the thread of a ligament in this manner we find it composed of a vast number of smooth round threads lying close together. Elastic objects should be pulled or stretched out while they are under the microscope, that the texture and nature of those parts, the figure of which is altered by being thus extended, may be more fully discovered.

To examine bones by the microscope, they should first be viewed as opaque objects; but afterwards, by procuring thin slices of them, they may be viewed as transparent. The sections should be cut in all directions, and well washed and cleaned; and, in some cases, maceration will be useful, or the bones may be heated to a high temperature, in a clear fire, which will render the bony cells more conspicuous.

AGRICULTURE, &c.

[*From the New-York Farmer.*]

CULTIVATING THE MULBERRY.—The following, we believe, is from "Goodsell's Genesee Farmer":

So well are we satisfied with the result of our experiments, and that it is unnecessary to go through with all the routine of first sowing the seed in beds, and then transplanting the trees from the seed bed to the nursery, and from there to the orchard, then to wait for them to become firmly rooted, and to expand their tops, before worms can be fed from them, that we design next spring to sow another pound of seed, from which we hope to raise from eighty to one hundred thousand trees, from which to feed from until our orchard shall arrive at maturity, and ultimately to transplant the young trees into hedges, which for large establishments are no doubt preferable to standard trees, as it facilitates the gathering of leaves, and renders the whole less expensive. We are fully confident that every seedling tree one year old is capable of furnishing food for one worm, or producing one cocoon; if so, the greatest obstacle to the immediate introduction of this branch of domestic manufacture is removed, and instead of waiting many years, and incurring heavy expenses in the cultivation of trees, before the manufacture of silk can be commenced, or any returns had from the investment, it requires no more time than is necessary to clear off a piece of land, and obtain a crop of wheat, and we are satisfied that the same labor bestowed will yield a richer harvest. I am, sir, yours, &c.

EDWIN STANLEY.

Adams' Basin, Nov. 12, 1833.

HOPS.—A gentleman from Germany informs us that American hops have been tried in that country and obtained a decided preference to the English; and that an increased demand from that quarter may be looked for hereafter.—[N. Y. Shipping List.]

A METHOD OF REARING EARLY PEAS AND OTHER VEGETABLES.—An English gardener states that "the method of rearing peas in pots and boxes, in hot-beds and hot-houses, and afterwards transplanting them out into open ground, is a common practice with gardeners, and often succeeds very well, particularly if they are not too long in transplanting them; but I would recommend a method not so well known, as far preferable to that of pots and boxes, particularly when they are to be raised in a hot bed. This consists in having a quantity of turf cut in pieces, of about nine or ten inches long, and three or four broad, which are placed in a regular manner over the surface of the hot-bed, grass side downwards, and a row of peas is sown upon each row of turf, and afterwards covered with soil; when they are fit for transplanting, no more is required than to lift out the turf, piece by piece, with the peas

growing upon it, and place them where they are to produce their crop. By this means the roots receive no injury, nor do the plants sustain the least check in transplanting. This method may be practised with similar success in the raising of potatoes, beans, &c."

Culture of the Mulberry. By the Editor.

The White Mulberry, Morus alba, a native of Asia, was introduced into Italy by the survivors of the last crusade. It was cultivated extensively in that country, and early in the sixteenth century carried into France. This is the species principally cultivated in the United States for feeding the silk-worm.

Sowing and Transplanting.—It can be propagated by seeds, cuttings, layers, or suckers. The seed, which may be obtained at any respectable seed-store, should be fresh and plump. Choose a rich piece of ground, and, if convenient, a sheltered situation in the garden. Let it be well dug and pulverised with the spade Sow the seed the latter part of April, or early in May, in drills from eight to twelve inches apart, and cover them to the depth of half an inch, pressing the soil with a spade, hoe, or roller. In ten or twelve days the young plants will begin to make their appearance above ground. By soaking the seed some twenty-four hours before sowing, in rain water, their vegetation may be hastened. The young plants should be kept free from weeds, and occasionally hoed between the drills. If too thick, they should be thinned when about three or four inches high, by taking some of them up with a dibber, or a chisel-shape board, leaving the remainder near a foot apart. If this is not done in a rainy day, the drills or rows should be well watered, that the young plants may be taken up with as much earth adhering as possible, and kept in a moist state until they are transplanted into fresh dug earth. If the tap root is cut off, when they are raised, it saves handling.

In the fall, before the plants cease growing, cut off the long tap roots of those that have not been transplanted, by thrusting into the ground a sharp spade, care being taken not to cut them off too short. Those that have had a vigorous growth may, if more convenient, be transplanted into their permanent places in the fall, or succeeding spring. Generally, however, it is recommended to transplant them into a nursery, in rows fifteen to twenty inches apart, where they remain to obtain the growth one, two, or three seasons. Whenever they are removed from the seed beds, or from the nursery, much care should be taken to preserve the soil around the roots, that the fibres may not be injured, or exposed to the sun or dry air. The soil where they are intended to remain permanently should be rich and well pulverised.

When intended for hedges, they are taken from the seed beds after the first season's growth, cut down to about six inches, and then set out in the hedge rows. If cattle are kep from the hedge for three or four years, they will make it grow the thicker by browsing the limbs.

The seeds are sometimes sown in the fall, immediately after ripening. If the winter is mild and uniform, they will succeed, and thus enable the grower to gain the greater part of the season.

One ounce of seed should, if good, produce from five to ten thousand seedling plants.

The proper soil for the mulberry is that free from excess of moisture: a dry, sandy, or stony piece of ground produces leaves congenial to the health of the worm, and productive of good silk.

Cuttings and Layers.—Even the first spring after the seed has been sown, the plants will supply wood sufficiently ripened for a large number of cuttings. They should be from five or six to ten or twelve inches long, and put in the ground nearly half their length. A soil retentive of moisture, and made pretty rich with fermented, particularly cow manure, and in a situation rather shady than otherwise, adds much to the certainty of the success of the cuttings. They may be put at distances most convenient for the grower; in rows that will enable him to hoe them. If the weather, before they are well rooted, be dry, they should be frequenty watered.

The white mulberry is also propaguted by layers, by bending those limbs nearest to the ground, and fastening in the usual manner the bend some four or six inches under the ground; or a sizable plant may be bent over, nearly flat on the ground, by loosening the earth on the opposite side with a spade. In this way almost every branch will serve for a layer. They may be cut from the parent stock the first or second spring after having been layed.

The Chinese Mulberry.—The Morus multicaulis, Chinese mulberry, was, we believe, first introduced into this country by the late Andrew Parmentier, of Brooklyn, in the year 1828. It has since been greatly propagated, and is rapidly extending over the country. As far as experiments have been made, it promises not only to be a rival of the white mulberry, but to supersede it.

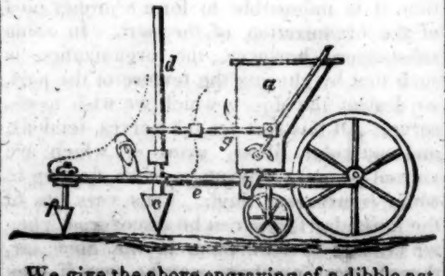
Its advantages are its very large leaves, affording a much greater amount of food for the worms; its being a tree of much less height rendering the gathering of the leaves not so laborious, and the ease with which it can be rapidly propagated by layers and cuttings. It is thought to produce silk equally as good, if not superior to that from the white mulberry. For hedges, it is supposed to be admirably adapted, from its disposition to send up numerous suckers, and from the richness and beauty of its foliage. The rapidity with which it throws out new leaves during the growing season, renders it a valuable plant for the rearing of two crops of cocoons.

Ppopagation.—It is generally increased by layers. A plant of one or more years' growth is bent over, in the spring, or early summer, by loosening the earth; the limbs are extended and firmly secured in the ground by pegs or crotchets. The whole plant and the branches are covered over with the soil to the depth of about an inch. If the soil is rich, a young shoot will rise from almost every joint, and obtain a growth of three to six or eight feet the first season. In the succeeding fall or spring they may be divided into separate plants, and transplanted.

If the soil is very rich, the young plants making a vigorous growth, the wood does not always ripen sufficiently to stand the winter of the Northern parts of the Eastern States.

Dibble.—It is very probable that increased attention will be given in this country to planting and sowing in rows. We give the accompanying engraving from the British Cyclopædia.

"This is an agricultural implement employed in making holes in the ground for setting grains, plants, and other sorts of crops in, which are planted in rows. Their form, and the materials of which they are made, differs according to the nature of the crop which is to be put in or planted out by them; but for grain they are mostly shod with iron. In some cases they have likewise a sort of step for setting the foot upon, in using them. When employed, they are thrust into the ground to a depth suitable to the crop which is to be put in by them, and holes thus formed, into which the seeds, sets, or plants, are put by the hand.



We give the above engraving of a dibble acting by the foot as already described; *a* represents the depository for the seed, &c.; the discharge valve is shown at *b*, the opening and shutting of the hopper being by a double lever, *g*, resting against the heel above, *e*; the dibble-iron and guide is shown at *c f*."

Report of Live Hedges.—The "Massachusetts Society for the Promotion of Agriculture," in the view it was their duty to take of those objects to which public attention might be beneficially invited, have thought that, in the progress of the culture and improvement of the country, Live Hedges would, in many places, become highly important and even necessary, where stone is not to be had, and timber, as must soon be the case, shall become more valuable for other uses. The beauty, permanency, and efficacy of this mode of enclosure is, with foreigners and many of our own countrymen, becoming a subject of taste and admiration. It is not our intention to deny the efficacy or expediency, in most places, at present, of a good rail fence, or, what is better, a strong stone wall. But, as our divisions of land multiply, these materials, in many places, will become more scarce and difficult to be had. As this shall occur, the introduction of live hedges will come into use here, as they prevail elsewhere. A gradual introduction of them must be useful, and add a verdure and beauty to the face of the country as its cultivation increases. Under this impression, the trustees of the Massachusetts Society were induced to offer a premium of $30 for the best hedge, not less than 100 rods, which shall be in the most thriving state in 1833.

On this subject the committee on live hedges have a pleasure in presenting to the public the following communication of E. Hersy Derby, Esq. It will be seen that he has, by well-tried experiment, established the perfect adaptation of the Buckthorn (or Rhamnus Catharticus) to our climate, as well as its preference over several other plants.

They therefore unanimously award to E. Hersy Derby, Esq. the premium proposed of $30, for his hedge, of upwards of 100 rods, and recommend that his detailed and useful communication on this subject be printed.

By order of the Committee,

John Welles, Chairman.

Salem, Nov. 30, 1833.

The Committee on Trees and Live Hedges.

Gentlemen,—Please consider me an applicant for the premium offered by the Society for the best buckthorn hedge, not less than 100 rods, which shall be in the most thriving state in 1833. On measuring mine, I find I have over 118 rods of the buckthorn hedge, which I have reason to think would be considered at least equal to any in this country.

The trustees generally have examined the state of it the present season. Should it be thought proper, I will make a few observations on my experiments in hedging.

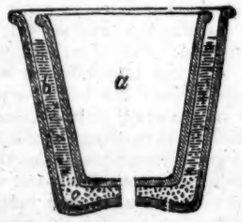
I have been for a great many years fully convinced of the superiority of live hedges for efficacy and economy. I began by setting out my first hedge about thirty years since, of the English hawthorn; the result was far from satisfactory; the plant, being not adapted to our climate, is injured by our summer droughts; frequently experiences blight early in August, and, by the first of September, assumes a wintry appearance. My next experiment was with the three-thorned acacia: to this hedge I devoted the most careful attention; but the result was equally unsuccessful. The plants run up without interlacing, and the thorns growing only upon the upper branches, the stems below were not thick enough to serve as a fence; it was beside too tender a plant to bear our severe winters. I also tried the crab-apple with but little better success. About 1808, there was standing in the garden of the venerable Dr. Holyoke, of this town, which adjoined that of my brother, a large tree of the buckthorn or rhamnus catharticus. In digging the latter, the gardener found several young plants, which

had grown from seed shed by this tree. They were given to me and set out in a nursery; finding they grew very rapidly, I was induced to set them out for a hedge some time in 1809, and in this attempt I was entirely successful. The length of this hedge is about 20 rods; has been a good fence over 20 years, and is, at the present time, in a fine, healthy state, not a single plant having failed since it was first set out. It presents a mass of verdure from early spring until late in the autumn, and is completely impervious, affording entire protection to the land it incloses. It being my first experiment with the plant, I did not head it down so low when young as I have since found it advisable to do; the consequence is, that it is not so thick at bottom as any of my others set out since. Finding it so hardy a plant, and so well adapted for hedges in our climate, I have been induced to cultivate it very extensively, and have, at different periods, extended my hedges until they measure nearly 120 rods in length.

The method I should recommend in setting a hedge, would be to place the plants in a single row, about 9 inches apart, either in the spring or fall of the year; if in the fall, I should clip it the next spring, within six inches of the ground, which will cause it to be quite thick from the bottom; any after-pruning can be made to suit the pleasure of the cultivator. I have also tried plashing; it was recommended to me in 1818 or '19, by my gardener (an Englishman), and I allowed him to try it upon a young hedge of crab-apple; but the hedge never flourished afterwards, and I, at last, pruned away the branches he had interwoven, and lost four years' growth by the experiment. I have never found plashing necessary for the strength or beauty of the buckthorn hedge, the natural growth of the branches being sufficiently interlaced. Three years' careful management in the way I have described is sufficient to form a perfect hedge, nearly as thick below as above. I am, gentlemen, very respectfully, yours, &c.

E. Hersy Derby.

Double Pots for Marsh and Tender Plants.—You will perceive that this double pot is formed by simply placing one pot within another, the latter being a size larger than the former, and uniting them at bottom with a little Roman cement. The holes in the bottoms of both plants must be opened with a stick before the cement stiffens; otherwise, of course, the water in the inner pot could not escape.



In the figure, *a* is the inner pot; *b*, the vacuity between the two pots; and *c*, the cement which unites them at bottom. By keeping the vacuity between the pots (*b*) filled with water, the smaller or inner pot (*a*) will absorb moisture sufficient for the nourishment of the plant, provided the material of the pot be not too hard burnt; the water between the pots can at any time be emptied out, and the outer pot will then act as a shade for the roots of the plant in hot dry weather.

In my humble opinion, if a cheap and simple method could be found for shading pots exposed to the sun, we should not have so many sickly scorched-looking plants in the summer season. I am not aware of any pots having been made on the above principle.—[Thos. Blair, Stamford Hill, June 22, 1833.]

This mode of equalizing the moisture and temperature of the exterior side of pots is, as far as our experience goes, quite new; and, certainly, it appears well adapted either for growing marsh plants, by filling the interstices between the pots with water; or delicate plants, easily killed either by too much water or by neglect of water, such as cape heaths, by using moist moss instead of water. Many persons find it very difficult to keep heaths in warm rooms, even during the short time they are in bloom, without either over-watering them, or keeping them too dry; Mr. Blair's pot, either with water or moss, would be an effectual remedy.—[Gardener's Magazine.]

Watering Plants in the Open Ground.—A mode of supplying plants growing in the open soil with water, during dry intervals of summer, practised by the Rev. Geo. Reading Leathes, of Shropham, Norfolk, deserves to be made known; and may, although it has nought of parallelism or likeness to Mr. Blair's, farther than its relation to supplying water, be described here. Soil dried to dustiness resists water; and not every assistant whom one may request to water the plants, which may be languishing in the garden, will take the patient and honest pains to give them the thorough soaking they require. When the soil about a plant or plants is dried to dustiness, the moistening it by watering requires that water be applied in a small quantity at a time, and repeatedly. The doing this occupies much time; yet you must either do this, or open with a spade, at the foot of the plant, a hole that will receive at once a larger supply of water; and this latter mode has the effect of leaving the gully hole, as it may be termed, and the earth which had been taken out of it, exposed to view: an offensive sight to those who have a passion for evenness of surface in the soil of their gardens. Mr. Leathes practises neither of these modes; but, as an equivalent to both, sinks into the soil, at the foot of the plant requiring water, a flower-pot, immersed to the half or whole of its height or depth, with its size proportioned to the quantity of water which the constitution of the plant may indicate it to need, and with the drain hole of the pot left open at the bottom. When each of the plants most liable to injury from drought has received the apposition of a flower pot sunk at its base, the watering of all these plants is thenceforth effectible with an increase in the rate of despatch, quite or more than equivalent, in a drought of some duration, to the first expenditure of time and trouble: besides, too, the valuable satisfaction supplied to him who takes this trouble, of feeling conscious that every plant receives the whole, and directly to its roots, of the quantity you may please to pour into the sunk flower-pot; through the drain hole at the bottom of which the water passes at a rate determined by the degree of absorbency in the soil, without detaining him who supplies it until it has soaked away.—[Loudon.]

Blood Manure for the Vine.—The vine is manured with bullock's blood in autumn, and the shoots are laid down and covered with dry leaves; by which they are protected against severe frosts, and also in the beginning of spring against those fine days which occasion their early vegetation. They are pruned in spring after the leaves are removed.—[Baron Kottwitz, in Loudon.]

The Propagating of Cabbages by Slips and Cuttings.—The first shoots only are applicable to such a purpose; the second run to seed. [Maund's Botanic Garden, June, 1833.] This fact, one of some consequence, is stated by Mr. Maund, on the cover of his number of the Botanic Garden for September, to be supplementary to the information on this subject in pp. 126, 127, and to have been communicated to him by the author of that article, Peter Kendall, Esq.

Sugar in Soups.—A London paper says, "Sugar is now becoming a universal ingredient in many of our soups in ordinary use, such as soup crisis, gravy soup, &c., being found to add greatly to their flavor and wholesomeness."

NEW-YORK AMERICAN.

FEBRUARY 15—21, 1834.

LITERARY NOTICES.

No. XV.

Marshall, (Calhoun Co.) M. T., Dec.

I confess that it was with some pleasure that—after dividing my time for several days, as described in my last, between roads rendered almost impassable by continual snows and log cabins, where the recent settler, however hospitable, had but spare accommodation to offer to the passing traveller—it was with some pleasure that on rising an elevation on the northern bank of the Kalamazoo, I saw a large frame building, which was evidently a tavern, rearing its comfortable looking chimnies above a group of log huts on the plain beneath. My horse, who had doubtless repented of former escapadoes in the companionable intercourse which had now for some time subsisted between us, seemed to sympathize in the feeling; and pricking up his ears, as he snuffed the grain in a flour mill directly beneath us, we descended the slippery height, and were soon tolerably well housed in the new Inn of Marshall. The house was indeed not as yet plastered inside; and the different bed-rooms, though lathed, seemed divided from each other rather by lines imaginary than real. But the bar-room wore already the insignia of a long established tavern in an old community; and apprized me at once, by the placarded sheriffs' notices, and advertisements for stolen horses, grain to be sold, and laborers wanted, which indicate the growth of business in country life, that society was in a pretty mature state—at least six months old—in the county town of Marshall. I was therefore not at all surprized to find among these notices a call for "a Railroad Meeting" in the evening—especially as nearly 18 months had elapsed since the first white man erected his cabin in this section of the country.

The meeting, which might be termed a crowded one, was conducted with more animation than unanimity. There were several very intelligent men present, however, and I listened with interest to their exposition of the resources of this section of Michigan, which, as a wheat growing country, may be justly compared to the celebrated Genessee valley of New York, while the soil, as I have heard it well observed by a resident, "unlike the heavily timbered land of the Eastern States, instead of wearing out one generation in subduing it for the purposes of the husbandman, invites the plough at once." Nor, if a railroad should be constructed from Detroit to the mouth of the St. Joseph's, passing through the counties of Wayne, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, and Berrien, do I think it would be too bold to assert, that the amount to be transported by the time the work was completed would be equal to one million of barrels; which is a less estimate by two hundred thousand than I have seen given by an intelligent writer on this subject, in a Detroit paper. The route thus designated I am persuaded, is the right one for a Railroad; though, should a different mode of communication be determined upon, it would be difficult to decide whether it were most expedient to construct a Canal from the Falls of Grand River to Detroit, or from the navigable waters of the St. Josephs to Monroe. I do not hesitate to add that before two years have expired, all of these routes will be under contract. The abundant resources of Michigan are developing so rapidly, that they will shortly require all these outlets; and in a country where you may drive a barouche and four for hundreds of miles in any direction through the woods, the expense of constructing more artificial ways will be comparatively trivial. Did I not know how ignorant generally the people of the East are of the resources and condition of this country, it would surprise me that some New York capitalists have not embarked in some of these

works. A prodigious speculation might be realized by laying out a Railroad on one of these routes above described; having first purchased the land in its vicinity at Government prices, to be disposed of afterward when its value should be enhanced by the completion of different sections of the work. The ingenious writer above alluded to, has already suggested this mode of covering the expense of such an undertaking. You can have no idea of the feeling existing on the subject of internal communications throughout Michigan; and it would amuse you not a little to witness the heart-burnings and jealousies on the subject which pervade a country but just beginning to be populated. The rapidity with which people establish themselves, and collect the indications of agricultural wealth around them, before they have even the ordinary comforts of life, will, in a great measure, account for their looking thus ahead and quarrelling about the game before it is hunted down. The farmer who has more grain in the sheaf stacked in the field than he can accommodate in his barn, is naturally more eager to find the means of sending a share of it to market. I was quite diverted at the turn matters took at the meeting which suggested these remarks, when a discussion in relation to the various routes to be recommended to Government in case they should consent to make a railroad through the Peninsula, became unpleasantly warm. "This pother reminds me Mr. Chairman, "said an old pioneer, "of two trappers, who, in planning a spearing expedition for the next day, quarrelled about the manner in which a turtle which they proposed taking, should be cooked for their supper after the days sport was over. An old Indian happily settled the difficulty by proposing that they should first *catch the turtle!* Now, sir, as this railroad"— "The case is not at all parallel," interrupted a still more ancient speaker, "for *Nature* has already caught the turtle for us. She meant the railroad to pass right along here and no where else."

The councils of the meeting were not on the whole, so harmonious as I could have wished from the courtersies offered me after its termination by the adherents of the two parties of Guelphs and Ghibbelins which distract the unborn city of Marshall. But it was surprizing to a stranger upon looking round at the hovels of mud and logs, which as yet occcuy its site, to find so many persons of intelligence and refinement thus collected in their precincts. The population of Michigan generally, as I believe I have before observed, is much superior in character to the ordinary settlers of a new country. The ease with which a man can here support a family as a farmer, induces a great many persons of all professions in other States to abandon their former pursuits and become tillers of the soil. The alteration of life I should judge by the contentment I everywhere witness, is almost always for the better.

I have met with several dispeptics who have been completely cured of that horrible disease by their change of life. With such, health is a sensation –a positive delight; and in duly estimating the blessing, they of course were ever ready to praise the conditions upon which they enjoy it. Others again bred up in a city, find in the indulgence of that love of rural life, which, when it is a natural taste is inextinguishable, an ample compensation for breaking up established habits and associations. The majority again are men of slender means; and while the necessity of attending practically to the subsistence of their families keeps them employed, the want of pecuniary resources prevents their embarking in the thousand idle schemes which tend so often to the chagrin and the ruin of "gentlemen-farmers." But the main cause of Michigan being settled by such respectable people, remains yet to be mentioned. It is that no one can take up an acre of land without first paying cash for it at one of the three land offices of the territory. The whole surface of the Peninsula has either been, or is now being, surveyed into townships of six miles square. These again are sub-divided into sections of a mile square; which sections are again cut up into lots of forty acres; which is the smallest quantity of land that can be taken up from the Government. The price is invariably $1 25 an acre. When you consider, therefore, that every emigrant who means to *locate*, (this is a sound American word, and as indispensable in the vocabulary of a western man as are an axe and a rifle among his household furniture) must, however poor, have some earnings in advance to purchase the spot upon which he is to live; and to bring his family to such a remote distance it will be easy to conceive that the industrious and the enterprising must constitute the largest portion of such a population of freeholders. The prosperity of a whole community, composed of such aggregate masses, may be safely predicted; and though one sometimes meets with those whom the first process of accumulating renders discontented and induces to speak ill of the country, yet in in general I may say, that the pride of a Michiganian in the beautiful land of his adoption, is as strong as the home-feeling upon which the citizens of some of the older States pique themselves. As for the sickness which alwyas prevails more or less among the new settlers, to one who is aware of their imprudences, the wonder is that the majority of them escape with their lives. Think but of people setting themselves down on a soil of twenty inches in depth, and in the month of June when the weeds and wild flowers oer-top the head of the tallest man turning over the rank soil immediately around their dwellings, and allowing the accumulation of vegetable decomposition to be acted upon by a vertical sun, and steam up for months under their very nostrils; and yet this, I am told, is continually practised by settlers who come in late in the season, and are anxious still to have a crop the first year. Here, as in the case of those settlers, who, for the sake of the wild hay, locate themselves near the great marshes, imprudence alone is manifested; but the charge of culpability will justly attach to some other cases, when nuisances, not before existing, are created by the owners of property. I allude to the practice, expressly prohibited by the laws of Michigan, of flooding land while constructing mill ponds without removing the green timber growing upon the spot. So pernicious is this to the health of the neighborhood, that it affects very sensibly the value of property near the new pond, and yet in their eagerness to have mills erected, and aid the market of their overflowing granaries, the new inhabitants overlook entirely the gross violation of their laws and the melancholy consequences which ensue to their families. Another cause of sickness is drinking the water of springs or rivers which head in marshes, and are of course impregnated with their baleful properties, instead of digging wells where water is not liable to such exception. As for general healthfulness of situation, I believe it is agreed that the banks of the small lakes which so abound in the Peninsula, are—when these transparent bodies of water are surrounded by a sand beach, which is the case with about a third of them—by far the healthiest. They are fed generally by deep springs, and and almost invariably are supposed to have a subterranean outlet, while so beautifully transparent are their waters, that the canoe suspended on their bosom seems to float in mid air. These lakes abound with fish, and in some of them of only a few acres in extent, fish have been taken of forty pounds weight. They generally lie embosomed in the oak openings, aud with their regular and almost formal banks, thus crowned with these open groves, these silver pools might be readily taken for artificial trout ponds in a cultivated park. I need hardly add, that it is necessary to diverge, as I have, from the route generally travelled, to see these scenic gems, so numerous, lonely, and beautiful. Not one in a hundred has a settler on its banks, and I confess I take a singular pleasure in surveying these beauties, as yet unmarred by the improving axe of the woodman, and unprofaned by the cockney eyes of city tourists; nor would I change my emotions, while ranging alone over the broad meadows, traversing the lofty forests, or loitering by the limpid lakes of Michigan, for the proudest musings of the scholar that revels in classic land. It may argue a want of refinement in taste, but I confess that a hoary oak is to me more an object of veneration than a mouldering column, and that I would rather visit scenes where a human foot has never trod than dwell upon those gilded by the most arrogant associations of onr race.

What are the temples which Roman robbers have reared? what are the towers in which feudal oppression has fortified itself? what the blood stained associations of the one, or the despotic superstitions of the other, to the deep forests which the eye of God has alone pervaded, and where Nature, in her unviolated sanctuary, has for ages laid her fruits and flowers on his altar? What is the echo of roofs that a few centuries since, rung with barbaric revels, or of aisles that pealed the anthems of painted pomp, to the silence which has reigned on in these dim groves, since the first fiat of Creation was spoken?

I shall diverge from my western course tomorrow, a few miles southward, in order to visit a groupe of lakes, near which a band of Pottawattamies, a tribe I have not yet seen, have their encampment. I will leave this letter open, in order to give you the result of my visit.

Pittsthorpe, (Calhoun Co.,) M.T. Dec. 23.

I write to you from a little cottage in a beautiful grove, not far from the banks of the Kalamazoo, where two young gentlemen, recently from the east, have erected their tabernacle in this land of enterprize. It is amusing to observe how little singularity people here attach to a mode of life, which, in older countries would be looked upon as highly eccentric. My entertainers are both young lawyers, liberally educated, and men of much accomplishment, and yet the house in which I am passing the night, with every article of furniture it contains, is of their own manufacture; saw, an axe, a wood knife, and a jack-plane being their only tools. It would amuse you not a little, to look through the window, and see our little groupe at this moment. One of my companions whose axe and rifle are suspended by wooden hooks o the rafters over his head, is professionally engaged in drawing a declaration at the table upon which I am writing; while the other having just got through removing the remains of our game dinner, prepared and cooked by his chums, is now sitting with a long pipe in his mouth, watching a coffee pot which steams up so fragrantly from the live embers, that no light consideration would induce me to part with the interest I have in its contents. Their house, which has been thus occupied for three months, is a perfect pattern of neatness, though as it consists of but a single room, no little ingenuity is required to arrange their books, housekeeping apparatus, and sporting equipments, so as to preserve even an appearance of order in such a banbox. They have already sufficient business, they tell me, to sustain their moderate household; and as the Indians supply them with abundance of provisions, they have ample leisure to devote to study. It is far from uncommon, however, to meet thus with persons of finished education, and accomplished manners under as humble a roof as this in the wilds of Michigan. For so rapid is the growth of society here, that he who aims at a prominent station in the new community, must be a pioneer far in advance of the growing settlements. Two years ago the first white man raised his log hut in the county of Calhoun, it has now a population of 1500, and I have passed an eve-

ning in more than one mud-plastered wigwam, whose fair and elegant inmates would grace any society, however refined. I cannot help sometimes, when I see these fair young creatures, the wives and daughters of men habituated by early education to all the comforts and elegancies of refined life, thus submitting cheerfully to every privation for the sake of those whose happiness is involved with theirs, I cannot help involuntarily calling to mind the jargon of novels so often adopted by people of sense in cities, where the terms "excellent match," and "supporting in the station where she has been accustomed to move," usurp all considerations of mutual affection, and capability in the parties united to study each others happiness through life. I am more than ever persuaded that there are two kinds of refinement in life which bear but little similarity to each other, and the one least often met with is that which is independent of modes and fashions of tailors, milliners, and cabinet makers—which does not necessarily lean upon a pier table nor repose upon a *chaise longue*, which—shall I confess it? may be nursed without a silver fork. The purest porcelain which the factories of China produce does not require a single tint upon its surface to show the fineness of the texture, but that in which coarser clay is blended is always charged with some gaudy hue to hide the intermixture of the mongrel material. This doctrine though, is so little in accordance with those taught in the English novels, which constitute the modern text book of elegance, that while the mode of eating an egg is the test of good breeding, and the art of pattering French phrases the criterion of intellectual cultivation, I should as soon think of interfering with the particular province of a lackey or *friseur*, as breaking a spear at such disadvantage with Almacks and Captain Hamilton.

But a truce to this prosing. Did you ever see a *jumper?* A couple of hickory poles so bent that the runners and shafts are of the same piece, with a crate placed on four uprights, complete this primitive species of sledge, and when the crate is filled with hay and the driver well wrapped up in a buffalo robe, "the turn out" is about as comfortable a one as a moderate man could wish. In such a vehicle as this, with a harness every way suitable, viz: a collar of undressed deerskin and reins of rope, (the twisted bark of trees is often used) did I, with one of my present entertainers, the first companion I have yet had in travelling, sally out from Marshall this morning. My horse, who had detained me here a couple of days by a soreness of his back proceeding from the saddle, seemed highly to approve of this new mode of travel: Mr. Osbaldistone behind Tom Thumb, Sesostris in his chariot, or *Yorke* in one of Brower's new Omnibuses, could not have dashed off with more glee than did we with our merry jumper along the dimpling waters of the Kalamazoo; when lo, just as we had crossed a bridge of unhewn timber and were under full way through the oak openings, our frail barque struck on a rock hidden by the snow, and we were capsized and wrecked in an instant. Fortunately, though both were pitched like a couple of quoits from the machine, we were neither of us hurt; and my companion returning to the settlement to borrow a horse, I mounted mine, and leaving the remains of my crank establishment, where chance had thrown them, I rode on, while he overtook me in time to introduce me to his friend, and make me so pleasantly at home in their dwelling, as you must observe, I now am. Good night, I will tell you to-morrow evening how we dispose of our time till then.

December 24th.

The air was mild this morning, and large flocks of snow-birds twittering among the bur oaks, with the jays screaming from the woods, and the covies of grouse rising continually before us in the openings, made our route to the camp of Warpkesick more like a ride in the spring-time, than a winter excursion. I was accompanied by my companion of yesterday; and as we were both well mounted we galloped over the openings towards Lyon lake, at a rate which brought us in a few minutes to the white sand beach which fringes that beautiful water. The marks of an Indian trail were here easily discernible; and following the foot marks dashed in the yielding sand, the frequent print of mockasons soon led us again away from the shore into a tall wood beyond. A morass that shook for yards around as our horses hoofs would encounter the sagging peat, was next to be crossed; and then passing between two small lonely looking lakes, where a tall pine or two lifted its sweeping cone above the tapering tamaracks around, we struck at last into a dense forest. Here the numerous deer-runways, with the flocks of wild turkies, and innumerable tracks of raccoons, wolves and bears, showed us that we were upon a favorite hunting ground of the Pottawattamies. As for the wolves they are little disturbed by the Indians, who consider them fair hunters like themselves, and privileged to go unmolested; they generally abound around a hunting camp; and soon grow fat on the offals of game slaughtered near it. But bears, though the successful hunter invariably takes his dead quarry by the paw, calls him his grandfather and asks his pardon for killing him, "being compelled to it by necessity," are hunted with great avidity; and you generally find a tamarac swamp, the favorite covert of these animals, in the vicinity of a hunting camp. We had ridden for about a mile through the heavily timbered land, when reaching the banks of the Nottawaseepe, a branch of the St. Josephs, I heard the sound of childrens voices, and descried two or three red urchins wading through the shallow stream on stilts, while others of a similar age were amusing themselves in shooting bows and arrows on the opposite side. We immediately forded the stream, and making our way into a swamp, where the horses would sink to their knee at every step, came unexpectedly upon a piece of firm ground, some eighty yards in diameter, and found ourselves in the middle of the camp of Warpkesick. It was composed of three or four wigwams, only but they were large and probably contained several families each. They were constructed of mats, arranged in the form of a tent, and supported by uprights at either end, an opening being left in the centre for the escape of the smoke, and a blanket supended over a hole cut in the side, supplying the place of a door. The day being mild for the season of the year the indwellers of these simple habitations were, at the moment of our arrival, variously occupied in several groupes on the outside. Some of the men appeared to be cleaning their weapons, and others were apparently engaged in arranging a bundle of muskrat traps—while one old fellow, whose screwed up features, peering from under a mass of grizzly locks, indicated the cunning of the trapper rather than the boldness of the hunter—was occupied in flaying an otter but just taken. The women were, however, the only ones who appeared to be assiduously engaged—the men having all a lounging air of indolence about them, incompatible with the idea of actual employment—dressing skins was the occupation of the former; and they each sat grouped like a hare in its form around a collection of boiling kettles, over which the skins were suspended. A tall virago of fifty, whose erect stature, elf locks, and scarlet blanket floating about her person, would entitle her to flourish as Meg Merrilies in the frontispiece of Guy Mannering, stood up in the midst and, had it not been for some tolerably pretty faces among her junior collaborators, might have been taken for Hecate herself, surrounded by the wierd sisters of the cauldron. A pack of wolfish looking curs, about twenty in number, completed the assemblage; which, when you take into consideration the variously colored calico hunting shirts, and cloth leggings, in which the females had arrayed themselves, with the white, blue, red and green blankets in which the men were wrapped, constituted about as motley a collection as ever followed Falstaff to the field. Warpkesick himself, the chief of the gypsey band, issued from his lodge while I was thus studying the appearance of his adherents. He was a young man, not more than thirty, with a handsome though somewhat voluptuous cast of countenance and remarkably fine eyes. His stature was rather below the middle size; and though the upper part of his person was extremely well formed, with a deep chest and broad flat shoulders, one of his legs, whether from deformity or misfortune I did not like to inquire, was so twisted under his body as to be worse than useless. He supported himself upon an aspen staff, about eight feet in length, and terminating at the bottom in a round ball, to prevent it, probably, from sinking too deeply into the earth while in rapid pursuit of game; the chief being, in spite of the unsightly incumbrance he is compelled to drag after him, when bounding like a stricken panther, on his prey, one of the keenest hunters of his tribe. He reeceived us courteously, but remained standing; while several Indians gathered in a few moments around him: after shaking hands with them all in succession, I took up a loaded gun, and by way of breaking up the formality of the meeting, desired an eagle-eyed young Indian to make a shot with it. He hesitated for a moment to comply, and immediately all the others from some whim or other insisted that I should shoot; our conversation being altogether in signs it was some moments before I understood their gestures; and I confess, that, having but little practice with a single ball, I was any thing but disembarrassed when I came to understand the purport of the request they were proffering with so much animation. A small blaze that was instantly made with a tomahawk in a sapling, forty or fifty yards distance, left me no excuse for pretending longer to misunderstand my worthy acquaintances, and placing the gun to my shoulder I was as much surprised at putting the ball within a couple of inches of the centre, as if the tree had screamed when thus peirced by my random bullet. Having met with those in Michigan who will drive a rusty nail with a rifle at this distance and shoot leaves from each other heads at six rods, I could not account for the degree of approval manifested by the spectators till my companion informed me that the Indians, owing perhaps to the inferiority of their rifles, which are of English manufacture, are but indifferent marksmen at still objects. "*Tai-ya*," cried the women, "*Neshin*," said the chief, and "*Nesheshin*," echoed his attendants; while the blankets of the lodges were now for the first time raised, and entering we stretched ourselves on mats around the fire. A youth of nineteen sprang to his feet as I removed the dingy curtain which formed the door, and revealed a face and form that might be the model of an Apollo. Being sick at the time he was but half dressed, the purple blanket dropping from his shoulders setting off a neck and chest of the finest manly proportions. His features were copied by nature from a Greek model; while his shaven crown, with the single chivalric scalp-lock would in its noble developments have thrown the disciples of Gall and Spurzheim into extasy. The particularity of his headdress, with the beautifully beaded leggings discoverable around his ankles, revealed to me at once, that the young gentleman was an Indian dandy—a Pottowattomie Pelham in an undress; and I assure you that Mrs. C—— never schooled any of his New York rivals to wear their Spanish cloaks with a better air than was exhibited by my red friend Neeshwa-coquatchegun, or Three-garters, as he gathered the folds of his blankets about his person. Pipes were now lit, and Three-garters, who was too unwell to smoke himself, politely, after a few whiffs, tendering me his, while my companion, who could partially speak the language, was supplied from another quarter, we were soon perfectly at home; when, as I was trying to squeeze a tune from a species of flute, of imperfect tones, but having a rich mellow sound, after unsuccessfully attempting to purchase (the owner being absent) what I considered quite a remarkable Indian curiosity,

Warpkesick rose suddenly, and stating that he had to start at once on a trapping expedition, signified that we should take our departure. An Indian poney stood at the door, and leaping at one bound into the wooden saddle, an immense bundle of steel-traps was handed to the Chief by a bystander, and, accompanied by an Indian on foot, almost as sorry-looking as the miserable beast he rode, our abrupt host disappeared at once in the woods. I was still trying to make terms about the flute, and had conciliated the squaws wonderfully by tearing out the silk lining of my frock coat, and giving it in shreds to their children, when my friend, being already mounted, told me we had better move off. I had barely time to cross the saddle, when a whoop rang through the woods, which, while it made my horse spring almost from beneath me would have wakened Rip Vanwinkle from his twenty years' doze. The piercing cry from the forest was echoed with an exulting shout from every wigwam. A dozen dusky figures leaped through their flimsy porches, and as many rifles gleamed in their hands. He of the heron feather was the first that caught my eye and as his gun pointed in the direction whence the first whoop came, immediately behind me, I could not help, in spite of the undesirable propinquity of its muzzle, admiring the eagle eye and superb attitude of the young warrior. Not a soul advanced three paces from the covert whence he sprung. There was a dead silence. The children held their breath, and "Meg Merrilies," who had stepped on a fallen tree at the first outcry, now stood so still that eldrick form, were it not for her elf locks, streaming over her scarlet blanket in the breeze, might have been mistaken for a creature of stone. Another whoop, and the cause of all the commotion at once appeared. A noble buck, roused from his lair by Warpkesick, comes bounding by the camp, and buries his proud antlers in the dust in a moment. A dozen scalping knives pierce his leathern coat, and the poor creature is stripped of his skin almost before he has time to pant out his expiring breath.

I rode home reflecting upon all I had ever read of the want of vivacity and fire in the Indian character, and concluded that I would rather have witnessed the spirited scene I have just attempted to describe to you, than double all the knowledge I have hitherto laid up from such sources.

I leave this comfortable house in the morning, and it will be long before I reach again one half so agreeable. H.

THE WRITINGS OF ROBERT C. SANDS, IN PROSE AND VERSE, with a Memoir of the author. 2 vols. 8vo New York: HARPER & BROTHERS.—Those even who knew, or thought they knew, the extent of the acquirements and reach of the genius of Sands, will, we are persuaded, rise from the perusal of these volumes with increased admiration of his knowledge taste and talents. The preliminary Memoir, understood to be from the pen of *G. C. Verplank*, is written with a warm and affectionate interest in the fame of one who, though much his junior in years, had long been a literary associate and personal friend; and it presents an enumeration of his labors and acquirements and forms an estimate of his intellectual and moral qualities, such as to excite both wonder and respect.

Of the contents of these two handsomely printed volumes, much has appeared before. The leading prose article, however, in volume I. is now for the first time presented in an English shape—an historical Memoir of Hernan Cortez. This was prepared by its author in order to be prefixed to a Spanish edition of Cortez's letters, printed for South America, and was translated, as it was written, into Spanish. This memoir was written with care, and after consulting all the authors who could throw light on his subject, and it will be admitted to be an admirable sketch of the Conqueror.

We extract from the notice by Mr. Verplanck, a summary of the acquirements and character of Mr. Sands.

In ancient and modern literature, and languages, he had few equals, probably in our country no superior. He read familiarly the Greek, Latin, French, Spanish, Italian, and Portuguese authors. All the treasures of English literature, in the broadest sense of the word, were stored in his memory, from Chaucer to Charles Lamb, from Cudworth to O'Keefe. He had a general and more than elementary acquaintance with the mathematical and physical sciences, but for these branches of knowledge he felt little curiosity or interest. He held and maintained with Johnson, that the knowledge of external nature is not the great or the frequent business of the human mind,—that we have perpetual occasion for those principles of moral truth, and materials of reasoning or illustration, which are supplied by poets, orators, and historians, but are chymists or geometricians only accidentally or occasionally. He had laid a deep foundation of law learning in his youth, and though he abandoned the profession, he never quite gave up his legal reading. He was, therefore, probably as sound a lawyer as can be made without the actual and continued practice of the profession. His reverence for the law, and love of its peculiar learning and reasoning, led him to an extreme of prejudice against all reform or melioration of the system. He admired and defended even those narrow and inconvenient entrances which the ingenious and apologetic Blackstone himself allows are to be found among the spacious apartments of the ancient castle of English common law. He had, also, something of the same sort of dislike against the metaphysics of political economy, a study he never relished and never did justice to. He frequently maintained that it was not entitled to the honor of being called a science, and that "all the trash about values, and wealth, and reproductive industry was not of the slightest practical use."—There was scarce any other part of knowledge which had not at some time excited his curiosity, and more or less engaged his attention. Hence his mind was stored with an immense mass of miscellaneous information; such as, if it is not learning, is often found much more useful. He had read extensively, though irregularly, in divinity and ecclesiastical history; and had settled his opinions on most of the contested points of theological discussion. His opinions seemed in general to be those of Taylor, Barrow, and the old divines of that school in the Church of England, which, however, he held with great moderation.

He reverenced religion, and all good and moral influences, wherever he found them to exist.

His large stores of learning and of practical information on men and things, could not have been accumulated without great activity and versatility of mind, and these he evinced in all his pursuits; for he possessed the power of vigorously directing the faculties of his mind to any chosen object of study, inquiry, or speculation. His fancy was surprisingly fruitful of original and striking combinations of ideas; and if his peculiar vein of humour had any fault, it was that of excessive and unrestrained exuberance. But he had none of that bitterness of spirit, or keenness of sarcasm which frequently give edge to satire. His indulgence in the laughable sprung from the love of the laugh itself. He had no touch whatever of the sneering misanthropy, or the contemptuous hatred for folly which have so often lent their savage inspiration to comic and satiric talent. His humour, as it overflowed in his conversation and letters, even more than in his written compositions, ran somewhat in the whimsically broad vein of Rabelais, (though quite free from his grossness) delighting like him to mix the topics and language of learning with the humours and phrases of humble or even of vulgar life.

It strikes me as a remarkable circumstance (whether common to him with any other learned wits, I cannot say) that with this buoyancy of imagination, this constitutional tendency to the jocose or the whimsical, all his favorite studies and literary recreations were of a very grave cast. He had early read most of the witty and comic authors of note, but rarely recurred to them in after life. When fatigued with business or literary labor, he did not as one might have expected refresh himself with Swift or Smollet; admire the chivalrous fancies and noble horsemanship of La Mancha's knight, or "laugh and shake in Rabelais' easy chair;", but he returned with ever fresh delight to hold communion with ancient ages and scholars, or else

> ——entranced to hear
> O'er battle fields the epic thunder roll;
> Or list where tragic wail upon the ear
> Through Argive palaces shrill echoing stole.*

So too, all his deliberately selected subjects of composition were of a serious nature, generally demanding grave reading and research. His pleasantry was all spontaneous, unpremeditated, unbidden.—Nor were his laughable associations ever applied to subjects worthy of higher thoughts, for quick as he was in his perception of the ridiculous, he was equally sensitive to all that is beautiful in nature, or grand and elevating in sentiment.

Who can read this sketch—beautiful as we believe it true—and not lament anew that its brilliant subject was prematurely cut off at the age of 33?

* Yamoyden.

TREVELYAN—by the author of Marriage in High Life. 2 vols.: Philad.—CAREY, LEA & BLANCHARD. An interesting story—from a female pen, so at least we assume—and wrought up with a thorough knowlenge of the human heart and its passions, modified but not subdued by the arbitrary rules of society.

The characters both of Trevelyan and his sister are portrayed with great skill, and have withal much of originality in them.

TRAITS AND TRADITIONS OF PORTUGAL—collected during a residence in that country, by MISS PARDOE. 2 vols.: Philad.—CAREY, LEA & BLANCHARD.—These are light and pleasing recollections by one who seems to have enjoyed the beautiful climate of Portugal, without suffering herself to be incommoded by the numberless inconveniences, especially to a female traveller, in that country of primitive usages. There is no continuous story; but, as the title implies, tales and traditions suggested by the place or company in which she happened to be. The stories, however, would have been quite as effective by the omission of the numberless Portuguese phrases, which—as the translation is given in notes—only serve to encumber the pages.

THE COOK'S OWN BOOK, AND HOUSEKEEPER'S REGISTER, &c. &c. By a *Boston Housekeeper*. 1 vol. 8vo. *Boston:* MUNROE & FRANCIS. New York: C. S. FRANCIS.—Some books are for instruction chiefly; others for amusement; some teach a particular branch of learning; others, more general, treat of the whole circle of sciences: but the book of books, profanely speaking, is that which exhibits man to most advantage in his distinctive character as "a cooking animal." Such a book is now before us—well printed, and with a due regard to the march of mind, now in full progress, having interleaved blank pages, whereon taste, curious of novelty, and fond of change, may record—for the benefit of after times, and future editions—the current remarks and *obiter dicta*, or opinions dropped by the wayside, of fastidious experimentalists. We therefore commend this book, as invaluable for reference, and especially to be consulted by all who desire to combine economy and health, with a reasonable share of good living.

THE MUSEUM OF FOREIGN LITERATURE, FOR 1834. —2 vols. 8vo. *Philadelphia*, J. LITTEL.—We are indebted to the publishers of this well conducted monthly miscellany, for the whole series of last year, bound up in two handsome volumes—and furnishing of themselves a great mass of agreeable reading—which may always be taken up—laid aside—and resumed at pleasure; and thus fill up many a gap of time that *might* at least otherwise be wasted. One hardly realises, till the volumes are before his eyes, the amount and variety of matter, which in the course of a year is accumulated in this periodical—which certainly seems more valuable when thus collected, than even in its fresher but more fugitive state of monthly numbers.

THE BOOK KEEPERS' ATLAS; or, perfect system of Book-keeping by double entry, &c. &c. by WM. EDWARDS.—New York, HARPER & BROTHER.—This is a handsome and clearly printed quarto volume, showing by a series of actual transactions the most approved mode of stating, and keeping, and checking mercantile accounts. It appears to us well done; but what is much more decisive, it is so certified to be, by many active and intelligent merchants of our city.

AN ELEMENTARY PRACTICAL BOOK FOR LEARNING FRENCH, adapted to the capacity of children; translated form the German of Dr. *J. H. P. Leidenstueck-*

er, by Mrs. Barbara O'Sullivan Addicks: N. York, J. B. Collins.—If we were in doubt as to the value of this school book and its adaptedness to the capacity of children, we should yield at once to the authority of the competent judges who have furnished the translator with the decisive testimonials she publishes of its merits. The method adopted in it, is that now generally pursued by, we believe, the most successful teachers in all languages—that of following, as nearly as possible, the natural way by which children come to the knowledge of their mother tongue: first by learning isolated words, then by combining them. This little volume is well and accurately printed.

Medical and Surgical Cases, &c.—by Dudley Atkins, M. D. N. Y.—Peter Hill.—A well-printed volume—of cases rare and difficult—which will, we dare say, have abundant attraction for the profession.

The American Journal of the Medical Sciences, for Feb. Philad.—Carey, Lea & Blanchard. This, like the former, is a work mainly for the profession. It is a quarterly publication, well-printed, and apparently with abundant contributions. We are struck with one remark in a paper by Dr. Gibson, of Philadelphia, detailing the operation of removing a large tumor from the neck of a lad of 18—namely, that on a comparison of the results of tying up veins—always a hazardous experiment—death has most usually resulted in Europe from such an operation, while in this country, Dr. G. avers, that he never met with any case of death or injury from the operation. For this remarkable fact Dr. G. thus accounts: "I think it very probable that the constitutions of patients in this country—owing to all classes of people being well fed and clothed, and little exposed to hardships—are generally superior to those of Europeans, and as such more capable of resisting the operation of injury or disease."

Daily Mortality of the Human Race.—The annexed extract from a work recently published in England, by *a Layman*, on the *State of the Departed Soul* taken in connexion with the sensation produced by the recent sudden death of Mr. *Bouldin*, of Virginia, on the floor of the House of Representatives, exemplifies anew the truth of the remark, that individual instances affect the imagination much more deeply than general truths. The death of this one Legislator, under the circumstances in which it occurred, startles the mind more than the immense fact, that more than *ninety-one thousand* beings, like him, perish daily.

From a late Work "On the State of the Departed Soul."

"The life of man, on an average, is little more than 30 years, and as there are one thousand millions of human beings on the face of the earth, (according to the latest estimate,) it will be found that 91,324 of our own race die every day. Every hour which goes over our heads, about 3,800 immortal souls go out of this world; and as the population of the earth is on the increase, a greater number come into it, to inhabit mortal bodies in their room—a consideration which should show how the necessity of preparation for yielding our places to others, and for joining the invisible flight of spirits which are continually leaving the earth; for no one can tell, but that the next moment, *his* soul may be called on to become one of the number.

The death of Mr. *Wirt*—after a short illness—at Washington, seems to have been deeply felt. The bar of the Supreme Court immediately assembled—*Mr. Attorney General Butler* presiding, when Mr. Webster offered a series of resolutions expressive of the admiration and respect of the meeting for the deceased, which he prefaced with a beautiful notice of the talents and character of his lamented friend.

[*From the Globe.*]

Appointments by the President.

By and with the advice and consent of the Senate.

William Noland to be Commissioner of Public Buildings in the City of Washington, in the place of Joseph Elgar, removed.

George Huyler to be Consul for the the port of Nassau, in the Island of New Providence, in the place of John Stoor, resigned.

Nicholas P. Trist to be Consul for the port of Havanna, in the Island of Cuba, in the place of William Shaler, deceased.

Maximo de Aquirre to be Consul for the port of Bilboa, in Spain in the place of F. Xavier de Ealo, resigned.

Joshua Dodge to be Consul for the port of Bremen, in the place of Nathaniel Pearce, removed.

Daniel Brent to be Consul for Paris, in France, in the place of Isaac C. Barnett, deceased.

Charles J. Hambro to be Consul for Copenhagen, in the Kingdom of Denmark, in the place of John Raynals, deceased.

Robert Grieve to be Consul for the port of Leith, in Scotland, in the place of Joel Hart.

John Morrow to be Consul for the port of Halifax, in the province of Nova Scotia.

Joseph Balestier to be Consul for the port of Rhio, in the Island of Bintang, in the Malayan sea.

Thomas H. Barker to be Consul for the port of Elsineur, in the Kingdom of Denmark.

W. M. Haxtun to be Consul for the port of Bathurst, in the Island of St. Mary's in the river Gambia.

By the annual report of the New York Savings Bank, it appears that in the course of the year 1833, they received from 20,015 depositors, $1,155,980,33. Five thousand and twenty seven of these new accounts. During the same period, $923 072,25 have been drawn out by 11,893 depositors; 2534 of whom have closed their accounts. Among the depositors, there are 150 clerks, 101 cartmen, 146 carpenters, 869 domestics, 400 grocers, 589 laborers, 331 seamstresses, 152 shoemakers, 123 tailors, 688 minors.

The receipts of the bank since its establishment in July, 1819, have been $8,902,137 24; and the sums repaid to depositors have amounted to $6,748,-202 65—having in the bank on the 1st of January, 1834, 2,153,934 59. Add to this the interest up to the same date, and including the January dividend, and there was due to depositors on the 1st of that month $3,105,778 03. The simple statement of facts in this report, shews in the most conclusive manner, the great value of this institution.—[Daily Advertiser.]

[*From the Journal of Commerce.*]

Bank of New Brunswick.—News was received here yesterday afternoon, that the Bank of New Brunswick, N. J. had suspended payment. Its circulation in the city of New York is believed to be small.

In consequence of injurious reports and the pressure of the times, the President and Directors of the Bank of New Brunswick have been under the necessity of suspending payment; but at the same time they deem it their duty to caution the public against sacrificing the bills of said Bank,—as they believe the Bank to be solvent; and that eventually all the bills will be redeemed. F. Richmand, *Cashier*.

February 18.

[*From the Lowell Journal of Wednesday.*]

Lowell, Mass.—We learn with regret, almost approaching to horror, that many of the directors and stockholders of the Factories in this town, are upon the point of deciding to stop the mills. The effect upon thousands of our people will be indescribable. Laborers of every class, and artizans of every trade, must go, they know not whither, to seek in vain for subsistence; and all the inhabitants who depended upon them again for a support, will be left destitute of means to obtain their daily bread. Others of the stockholders, and especially the agents and superintendants, are desirous of preventing this annihilation of the laboring interests, by reducing the rates of wages so low, that they would feel justified in continuing to manufacture for the present, though no doubt can exist, for a moment, that it would be safer and better for them, on many accounts, to stop at once. Common humanity will pray, that the results of their deliberations may be favorable to the poor, and if such a rate of wages can be established as will prevent too great a sacrifice on the one hand, and enable the working classes to live for a time on the other, we may hope, that dark as the prospect is before the country, some means will be devised by the Government to restore prosperity, and give a new impulse to manufacturing enterprize.

From France, we have received papers which should have reached us Friday last, to 26th Dec'r.

They present the King's speech on meeting the Chambers—as unmeaning as the most unmeaning of its forerunners—and which, though it alludes to all European nations, with whom questions of any sort are pending, makes no reference whatever to the United States; notwithstanding the fact, that a treaty, duly ratified on both sides, has been rendered inoperative by the fault of the French Government.

We take the extracts which follow from the Courier and Enquirer:

France.—Paris, Dec. 24.

His Majesty's Speech on opening the Session of the Chambers.

"Peers and Deputies—Gentlemen, France has continued in undisturbed tranquillity since our last session, and the enjoyment of the blessings of order and peace. Throughout the country, industry and labor meet with their reward. The population, occupied and peaceful, feels assured of the stability of our institutions, of my fidelity in watching over them, and that public security is the pledge of national prosperity.

"It was by guarantying our rights, protecting our interests, and by the equity and moderation of our policy, that we have obtained these happy results.

"In order to render them lasting, we shall persevere with energy and patience in the same system. An unceasing vigilance is still necessary; insensate passions and culpable manœuvres are at work to undermine the foundations of social order.

"We will oppose to them your loyal concurrence, the firmness of the magistrates, the activity of the administration, the courage and patriotism of the National Guard and the Army, the wisdom of the nation, enlightened as to the danger of these illusions, which those who attack liberty, in pretending to defend it, still seek to propagate—and we will insure the triumph of constitutional order and our progress in civilization. It is thus, gentlemen, that we shall at length put an end to revolutions, and accomplish the wishes of France. I thank her for the support she has given me. I thank her for the tokens of confidence and affection with which she has surrounded me. I received them with emotion in each of the provinces as I have been able to visit; and I render thanks to Providence for the blessings which our country already enjoys, and for those of which the future holds out a promise.

"You also, gentlemen, will second me in my endeavors to protect the increase of our national wealth, in opening to our commerce and industry new sources of prosperity, and to spread ease with labor throughout all classes of the population.

"I hope that the new Law of Customs, while it evinces the progress of our industry, will conciliate the protection that is due to it, with those principles of wise liberty which enlightened governments are disposed to admit.

"Popular instruction has received, thanks to your concurrence, a salutary impulse.

"The Finance laws, and those required by the execution of treaties, will be speedily presented to you. The public revenue improves, and every thing foretells that it will continue to follow the ascending movement of our prosperity.

"Several projected laws, some of which have been already presented to you, will also be submited to your deliberations. I have reason to hope that the promises of the Charter will be accomplished in the course of this Session.

"I am happy to announce to you that our relations with all the Powers and the assurance I receive from them as to their dispositions, leave no doubt as to the mainteinance or the general peace.

"The Peninsula has become the theatre of important events.

"As soon as the Government of the Queen Donna Maria II. was established at Lisbon, I renewed our diplomatic relations with Portugal.

"In Spain, the death of King Ferdinand VII. has called the Princess his daughter to the throne. I hastened to acknowledge the Queen Isabella II., hoping that such prompt acknowledgement, and the relations it established between my Government and that of the Queen Regent, would contribute to preserve Spain from the miseries with which she was threatened. Already tranquility is beginning to be restored to the provinces in which rebellion had broken out. The corps de'armée, which I have ordered to be formed, will protect our frontiers in any event.

"Continuing to be intimately united with Great Britain, we have every reason to hope that the difficulties which still retard the conclusion of a definite Treaty between the King of the Belgians and the King of the Netherlands, will compromise neither the great interests of Belgium nor the tranquillity of Europe.

"Switzerland has been momentarily disturbed by dissentions, which the prudent firmness of her Government in a short time appeared. I hastened to render her the services that she had a right to expect from a faithful and disinterested ally.

"The Ottoman Empire has been threatened wit great perils. I was anxious to hasten a pacificatie at once called for by the interest of France, and the stability of European order. I shall continue my efforts to ensure its preservation.

"The events which I have just mentioned, and especially the situation of the Peninsula, have rendered it my duty to maintian the army upon the footing required by the safety of the State.

"Let us consummate our work, Gentlemen; let order, powerful and respected, be henceforth shielded from every attack. Let the efficacious protection of the national interests dissipate the last hopes of the factious, and France, happy and free under the tutelary shield of the Government she has founded, will at length pursue without obstacle the career of her prosperity. This is my most ardent wish, and you will asist in securing its accomplishment."

PARIS, DEC. 24.—"When the opposition Deputies entered the Chamber yesterday, the Ministerial members accosted them, and in great perturbation made them the most alarming recitals. The *Societé des Droits de l'Homme*, they said, had, on the preceding evening, held a meeting, and resolved that one of its members should, after the delivery of the speech from the throne, rise, and declare that Louis Philip having, like Charles X., violated his oath, he had released every Frenchman from his allegiance. M. Vayer d'Argenson had excused himself from undertaking the task, which was then entrusted to M. Audry de Puyraveau, who had accepted it, and was to be seconded by M. d'Argenson. The deputies of the *Gauche*, on hearing the statement of this enormity, received it with ridicule, but could not dissipate the alarm of their colleagues of the *Centre*. Fortunately, a deputy, who is the friend of M. de P., on hearing the tale of scandal, informed them that the Honorable Deputy for the Charente Inferieure had not yet left his department. The alarm, however, had not subsided, and contributed to increase the acclamation when the King entered the Chamber. This news promulgated in the Chamber, was circulated throughout the day before. It is probable that Count d'Argout suffered himself to be abused by some stupid report of the Police, and gave credit to it without making any inquiries as to its truth."

HAVRE, DEC. 22.—The westerly winds that have constantly prevailed for the last six weeks, have kept upwards of fifty vessels of different descriptions completely bound in the port, and on the first favorable change, we shall have the sight of a large fleet leaving our harbor. The weather continued very tempestuous throughout last night, the gale blowing at times with very great violence, but this morning it has subsided, though the sea continues to roll very heavily."

SPAIN.

PARIS, DEC. 25.—The following intelligence, from Madrid, is of the 13th inst.:—"Tranquillity is far from being re-established; on the contrary, the insurrection is becoming more general. In every direction, the public spirit is showing itself more hostile to the Government of the Queen; on one side the Liberal party, with its importunities, and on the other masses of fanatics, following the instigations of the ecclesiastics, who seduce and excite them. The Government is moving in five different directions, for each Minister has a policy of his own; consequently it is impossible that there can be any accord in the system. The Prime Minister is in favor of resistance, or even of reaction—he of the *Fomento* (Interior) for a progressive improvement of the administration of the country; hence the late territorial division, and hence by a decree of the 10th inst., a free commerce in silk, paper, soap, cloths and other articles, has been adopted.

The Minister of the Finances confines himself entirely to his department, and intends to introdnce important improvements; the Minister of War, more enlightened than the others, is forming the army upon the Constitutional basis, being the officer who, in 1832, at Cadiz, had the direction of the staff till Ferdinand was released. The Minister of Justice, in order to do nothing that may compromise himself, holds to the *statu quo* of his predecessors. And all this is done in the presence of a Council of Government directed by the Marquis de las Amarillas, which frequantly renders the Royal power uneasy because it is supported by the public, and increases its influence in proportion to the unpopularity of M. Zea. At Aranjuez disturbances have become so serious as to warrant the appointment of a Governor with unlimited powers, as in a state of siege. The officer appointed is Major Don Manuel Pinto, who has set out already, accompanied by an Advocate, and who is to act as his counsellor in the Courts Martial that are to be holden.

The Queen, wishing to hunt in the forest of Vignuelas, was obliged to surround herself with troops in order to ensure her personal safety. At Almodovar, a band of 350 men are moving about the country, proclaiming Don Carlos. At Agadete, a monastery has been converted into barracks for Carlist insurgents. At Fuente del Ropel and Castro Gonzalo, Carlist soldiers have been seen taking the road to Portugal, probably to join Don Carlos. At Olmeda the Volunteers who escaped from Madrid have been overtaken and disp-rsed by the Queen's troops. At Jepes sixty Carlists having attempted to gain possession of some property belonging to the Queen; the burgers have been armed as a means of protection. At Valderroble and Calacette some considerable columns of Carlists are said to have been attacked by Gen. Carsatala. At Elda and Petrer the Carlists have been endeavoring to stir up the people, but Col. Jartes, who on the 5th was at Infantes, was preparing to attack them. In La Mancha, El Locho is at the head of the insurrection which has proclaimed Don Carlos. In this country are also the bands of Sedillo and Barba.

At Cabreros and Naval Carnero in the very environs of the capital, bands of Carlists audaciously parade about; they are paid and protected by the Convent of Guisando. On the second instant the Bishop of Leon omitted the town of Cararellos in order to join Don Carlos, taking the direction of Carcion. Troops have been sent against the Convent of Matallana, one of the principal promoters of the rebellion. The accounts from Bilboa and Biscay, are much more favorable to the Queen's cause. Don Vincent Sancher Salvadoz has been appointed Military Governor ad interim of Badajoz.—At Seville, a Carlist plot has been discovered and many arrests have been made, and the Prefect of Police at Santa Cruz, has been obliged to place many of the most distinguished inhabitants of the town in secret confinement. A great many officers of the Regiment de la Reyna who were in garrison there have deserted and fled to join Don Carlos in Portugal. At Riofrio the chief Balmaseda is proclaiming Don Carlos at every point. On the 4th, he took from the Royal Depot at Siguenxa, ten thousand uniforms for 365 men, and seventeen muskets. At Butares the Carlist Chief Vargas has been surprised, taken and shot, but his followers continue to devastate the country.

At Valencia the whole country is filled with Carlist bands, but the high road is not occupied by them. General San Martin is shortly expected to arrive in the province and put them down. At Burgos, on the 5th, several Carlist chiefs were shot. This part of the kingdom is remarked for its fanaticism. The rebel leder, Carnicer, is at Beceite with 300 armed men. This is a general view of our situation, which can scarcely be considered as an advantageous one, when the difficulties it throws in the way of collecting taxes, and providing the Government with the means of putting down the insurrection are taken into the account. Under these circumstances, the announcement of the retreat of M. Remisa, the Director-General of the Treasury, is not without importance. It is reported that he will be succeeded by M. Gargollo, Director of the Sinking Fund." Another letter from Madrid of the same date gives the following:—"M. Burgos, the Minister of the Interior, has been honored with the Grand Cordon of the Order of Isabella the Catholic.

M. Latre, Prefect of Police at Madrid, has been promoted to the rank of Major in the Royal Army. He was one of the Deputies to the Cortes in 1820.—M. Clemencin, formerly Minister to the Cortes, has been appointed Librarian to the Queen, in the room of M. Fernandez, deceased. All these acts partake of the *movement*, which M. Zea wished to avoid by his manifesto and circular letter. M. Burgos has conciliated the nobility by investing them with employments. As to the Count de Florida Blanca, he is opposing the Ministry with great adroitness, and gaining popularity by demanding, not a system of anarchy, but a wise, just, and enlightened administration. At the same time the Carlists are not discouraged."

Extract of a letter of the 26th inst. from Bayonne: "One of the Secretaries of the French Embassy at Madrid arrived here yesterday, having been stopped and robbed by the Carlists at Villa Real. The mail, which left here on the 16th for Madrid, has also been stopped at Villa Real. The letters were taken out, and the passengers robbed."

The *Estvella*, a Madrid paper of the 8th instant, says—"A steam vessel, a frigate, two brigantines, and two transports, all belonging to Don Pedro, have arrived at Faro el Lago, and landed 1800 men, between 80 and 100 horse, and a large quantity of ammunition and provisions." The same journal also contains the following:—"It appears that 700 horses, with several artillery wagons, and about 60 other carriages belonging to the army of Don Miguel, have arrived at Valencia de Minho. They retreated in consequence of the late affairs in the environs of Oporto.

TURKEY.

SMYRNA, NOV. 16.—The number of European ships of war stationed in our seas, is increased every day. Sir Pultney Malcolm sailed hence yesterday for Vourla, where the greater part of his squadron is assembled, and where he will receive the reinforcement sent him from England. The British admiral will not quit that port until he receives fresh instructions from his Government, which he expects next week by the Salamander steam-packet. Ali is too powerful; it is thought, however, that this state of things cannot last long; and that Mehemet Ali himself, seeing the impossibility of establishing a monopoly in Crete, as he has done in Egypt, and as he may do perhaps in Syria, will give a possession which can only be injurious to him. It is said that the regiment last arrived, of 3,200 men, will relieve the Albanian troops in their cantonments. The Egyptian Admiral, Osman Pacha, is still off Sunda, with two ships of the line of 100 guns, one of 84, and a frigate of 60. An Egyptian sloop of war was lost in a storm on our coast a fortnight ago, with all the crew, 27 in number.

VIENNA, DEC. 17.—We learn from Odessa that several ships of war are fitting out in the ports of the Black Sea, a proof of a fixed resolution to be ready to meet events. The commercial world is in the meantime, no ways uneasy as to the interruption of peace, hoping to see those differences between the Great powers speedily arranged, and a general disarmement follow.

CONSTANTINOPLE, Nov 12.—The Ottoman fleet is disarming, and will, as soon as the Sultan has returned to his palace at Therapia, leave the roads of Beschiktash to return to the arsenal.

The *Hambug Correspondent* says: The answer of the French Cabinet to the Note from that of Russia, respecting the affairs of Turkey, is, it is said, very strong, and the reply from Russia still more so. If as is believed possible, the French Ministry, in order to gain favor with the Chambers, should publish its answer, the reply of the Russian Government must also appear before the world.

HUMAN FATE.

A little child, a little child,
Upon its mother's knee,
With dimpled cheek, and laughing eye,
A holy sight to see.

A thoughtless boy, a thoughtless boy,
A truant from the school,
Urging his tiny wooden sloop
On through the glassy pool.

A musing youth, a musing youth,
With eyes fixed on a book,
Where he but sees his mistress' face
In her last farewell look.

A gay gallant, a gay gallant,
Hero of club and ball;
His father's pride, his mother's joy,
Admired and loved of all.

A traveller, a traveller,
Returned from foreign strand,
With store of wisdom, culled with care,
For use in his own land.

A happy man, a happy man,
With wife and children round,
And smiling friends, and cheerful home,
Where all pure joys abound.

A patriot, a patriot,
Intent on public good,
Who, in a court's ordeal tried,
Corruption's bait withstood.

A man of woe, a man of woe.
Bankrupt in heart and wealth—
Wife, children, hopes, all in the grave,
A bankrupt, too, in health.

A misanthrope, a misanthrope,
Disgusted with mankind,
Deserted by deceitful friends,
Whom favors could not bind.

A lunatic, a lunatic,
In melancholy mood,
Shrinking from every living thing—
Sighing in solitude.

A burial, a burial,
With none of kin to weep,
And lay the old man 'neath the sod,
To take his last long sleep.

Strange companie, strange companie,
Are these to meet, I ween!
Alas! they are but life's changes,
That in ONE MAN are seen!

RAILROAD CAR WHEELS, BOXS AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examin these Cars; a specimen of which may be seen on that part o the New-York and Harlem Railroad, now in operation.

J3 1f

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

TO STEAMBOAT COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, offers his services to render steamboats incombustible, and not liable o sink, even by the bursting of boilers, or striking against snags, sawyers and rocks. This will save many boats, much property, and the lives of hundreds every year. Those who neglect this easy improvement, deserve to be neglected and deserted by the public as unmindful of safety. Apply, post paid.

S1 R J MM & F

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, *Flat Bars* in
200 do. 1¼ do. ¾ do. lengths of 14 to 15
40 do. 1½ do. ¾ do. feet counter sunk
800 do. 2 do. ¾ do. holes, ends cut at
800 do. 2½ do. ¾ do. an angle of 45 degrees with splicing plates, nails to suit.
soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2¼, 2⅜, 2½, 3, 3¼, 3½, and 3½ inches diameter for Rail wayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments, and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,

WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 40, page 778 of this Journal. 4t

AN INTERESTING AND USEFUL MAP.

A friend of ours has now in a state of forwardness, a Map upon which will be delineated nearly all the Railroads now chartered in the U. States. It is designed to show the *present* contemplated connexion of the different lines, as well as where others may hereafter be constructed to connect with them. It will be completed in a few weeks, and may be had either in sheets, or put up in morocco for pocket maps, in any quantity, by applying to the subscriber. D. K. MINOR, 35 Wall street.

New-York, August 14, 1833.

INCOMBUSTIBLE ARCHITECTURE.

☞ INCOMBUSTIBLE dwelling-houses and buildings of all kinds devised or built in New York, or any part of the United States, as cheap as any other combustible buildings. Actual buildings and houses rendered incombustible at a small additional expense.

SHIPS of all sorts, and Steamboats, rendered incombustible, and not liable to sink, at a small expense.

For sale, 10,000 lbs. of ANTIGNIS, or Incombustible Varnish, at one dollar per lb.

Apply to C. S. RAFINESQUE, Professor of Hist. and Nat. Sciences, Chemist, Architect, &c. in Philadelphia, No. 59 North 9th street. A pamphlet given gratis.

References in New-York.—Mr. Minor, Editor of the Mechanics' Magazine; Messrs. Rushton & Aspinwall, Druggists

Editors in the city or country, copying this advertisement, will receive a commission on any contract procured by their means. S1 R J MM &F

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Rail road Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same. m26

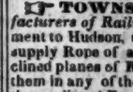
TO RAILROAD COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, will undertake to build CARS that will carry along their own railway, and may be used on level M'Adam roads. They will save ten millions of money to be wasted on 1000 miles of iron railroads to be laid in the United States within a few years, and dispense with tracks and double tracks. These Cars may be drawn by horses or steam. He claims to have discovered them ever since 1825, by his caveats filed in the Patent Office. Apply, post paid. S1 R J M M & F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Esq. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wutzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.)

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardeners' Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly, and Semi-Weekly; either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany.*

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. and Norristown Railroad

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[*From English papers.*]

ST. SIMONIANS.—M. Prati is continuing his lectures on St. Simonism at the Burton Rooms. We went yesterday evening to hear him, but we found that he said little or nothing which we have not given before in our notices of his former lectures. The chief topic last evening was the emancipation of women, which was to be brought about by education. Women were to receive the same education as men, and if they did they would be found equal to men in every thing that required mental faculties only. He had studied Gall, and phrenologically examined many women's heads, whose organs, save that of combativeness (Query—d d he ever examine the Amazonian heads of the ladies of St. Gile's and Billingsgate?) were even more fully developed than those of man. From that he concluded, that if they received a proper education, they would excel men in the Arts and Sciences, and become equally if not more capable of directing industry, upon which his system is chiefly founded. He, therefore, hoped to see in the new arrangement of society, women great politicians, deeply scientific, and surpassing in the fine arts. He exhorted the ladies present, (there were few old ones who came to hear him) to apply themselves to study; and he assured them, if they did so, they would soon become equal to men, and be no longer subject to them. He counselled them to despise the epithets of "blue stockings and learned ladies," which the tyrant man applied to them merely to keep them in a state of subjection. He called upon them most emphatically to form an association for the emancipation of females, which would become not only the school of their own emancipation but of that of all mankind. Women were always benevolent and good, and the great Poet, who wrote the most offensive lines against them, could not at last help avowing that women were Samaritans in every situation. A great servile war was at hand unless women stepped in as did the Sabine women of yore, and preached and practised reconcileation. If they would apply themselves to study and emancipate themselves, they would speedily smooth down the roughness of man, and create a new heaven upon earth.

A gentleman here asked whether the St. Simonians intended to sweep away the present order of things; what was to be the form of their new government; and what placess women were appointed to fill in it?

M. Prati said, the St. Simonians intended to sweep away nothing, but that the present state of things would sink under its own rottenness. The form of their government was to be a hierarchy—not an hereditary one—founded on nature, in which those of the greatest capacity would preside. The station appointed to woman would be that her capacity entitled her to. She might fill any situation which did not require great strength and muscular exertion.

Another Gentleman asked whether women were to command ships.

M Prati. Oh certainly!

The same Gentleman. Do you also intend to *man* your ships with *women* [laughter]?

M. Prati. Not exactly; there may be half men and half women—that would make the voyage pleasant; but, on reflection, I think it would be better that there should be no women at all, since the employment of a sailor requires great muscular exertion. Women are to be captains and commanders, but not common sailors.

A general discussion then took place between the persons present on the form of government, the distribution of property, and the rights of women.—Though we paid great attention, we could not understand the different theories, nor, we believe, did the disputants themselves, since the matter ended in a general challange, to be decided some day next week.

PRINCE TALLEYRAND: *Anecdotes.*—During a part of the time when Prince Talleyrand was an emigrant, he was reduced to so much want, that he was even obliged to sell a valuable watch. "I know a gentleman," said the Marquis d'Assigny to the prince, "who will lend you a few hundred crowns. I yesterday heard him say, in the presence of two opulent English merchants, that he always keeps two thousand crowns to serve his friends." "You are laboring, I apprehend," replied the prince, "under a mistake; if he lent me this money, he would no longer *keep* it."

"What is your opinion respecting Mr. Nugent, a very witty old man?" said a friend to Prince Talleyrand. "He always puts me in mind of an antique château haunted by spirits—*dans lequel il revient des esprits.*"

The Countess de ——, whose amours formed a general subject of conversation, was blamed in very severe terms by a certain lady, in the hearing of Talleyrand. "I cannot entirely agree with you," said the prince; "the countess is merely enjoying the loss of her reputation."

"I was standing on the Pont Royal one evening," said Talleyrand; "a splendid carriage passed, in which was La Tour, the commissary-in-chief of the army, who had been a footman. 'Do you know who that person is?' cried a fish-woman to her comrade. 'Yes,' replied the latter; 'he is a *ci-devant derrière*.'"

Mdlle. Fanny S——, a very lovely girl, had been the greater part of the evening in earnest conversation with a young clergyman, remarkable for his handsome person. When the latter had taken his leave, the young lady said to the prince that she had been much edified, and that the congregation—— "Flock, you intend to say, Miss ——. I suspect our friend to be more of a shepherd than a pastor."

"He relates an anecdote extremely well," said Mr. B., speaking of Count Daru; "but half the stories he recounts are untrue, although they have the appearance of probability. What satisfaction can he derive in deceiving us?" "That pleasure," said the prince, "which a man experiences in making others believe what he does not believe himself."

A discussion arose respecting certain usages among different nations. "They may all be traced to some motive," said Lally Tollendal. "Why, then, said a gentleman, "do the French, in driving their vehicles, give and take the left? In a drawing-room, you always give the right: you cede the right upon all occasions when you intend to shew deference to a person." "It is quite clear," said T. "that the English are better whips than we; if there were no other reason than this, it would show that we are in the wrong. The riders sit on the right, and are, of course, able to see how near the wheels can approach each other. Talking of right and left, as far as etiquette and precedence are concerned, recalls to me the saying of Madame Palatine de Bavière, the abbess of Maubuisson. Another abbess, who was about to pay her a visit, sent to inquire if the right would be given to her. 'Ever since I have been a nun,' replied Madame Palatine, 'the only difference I know between the right and the left is in making the sign of the cross.'"*

*** At the commencement of the last year I offered to send the American *tri-weekly* instead of *semi-weekly*, together with two of my periodicals, in exchange to those who would publish my advertisements of the different periodicals. In consequence of this notice, the exchange list was increased to 165. I soon found that the expense would be greater than I had anticipated, yet I had made the offer, and would of course continue it through the year—as I have done. I however find it *too expensive* to coutinue to send as heretofore. The circulation of my PERIODICALS, (upon which the expense falls,) will not warrant it, and I must, therefore, notwithstanding the uniform kindness with which they have been treated by those to whom they have been sent, materially *reduce* their *exchange list.*

The *semi-weekly* American will hereafter be sent in exchange to those who will publish the following advertisements a few weeks for the difference of price. *New-York, January* 20, 1834.

VOL. III. OF THE RAILROAD JOURNAL AND ADVOCATE OF INTERNAL IMPROVEMENTS is published once a week in quarto form, with 16 pages to each number, at $3; or in *semi-monthly* form, of 32 pages, stitched in a cover of colored paper, at $4 *per annum, in advance.* The *first* and *second* volumes of the Journal may be had in *two* parts to the year, either stitched in *covers* or bound in boards, at the subscription price, with price of binding, in one part, 50 cents, in two parts $1 per volume. Those in covers may be sent by mail to any part of the country, the same as a magazine. Published at No. 35 Wall st., New-York, by D. K. MINOR, Editor and Proprietor.

THE MECHANICS' MAGAZINE AND REGISTER OF INVENTIONS AND IMPROVEMENTS is now just commencing its *second* year. It will be continued in a manner altogether *superior* to that of the first year. It has drawn forth many valuable correspondents, in different parts of the country, with the assistance of whom, and those who may hereafter contribute to its columns, together with the ability of Mr. JOHN KNIGHT, formerly, and *for several years*, proprietor and publisher of the LONDON MECHANICS' MAGAZINE, who is engaged as Editor, the proprietor has no hesitation in saying that it will be found worthy of an extended circulation and a liberal support. The *first year*, or *two* first volumes, *having been stereotyped*, may now be had either in numbers, or bound in boards—either at *wholesale* or *retail.* Price $1 50 per vol. in numbers, or $1 75 in boards, or $3 per annum. A liberal discount made to the trade. Published by the proprietor, D. K. MINOR, at No. 35 Wall st. N. Y.

THE NEW-YORK FARMER AND AMERICAN GARDENER'S MAGAZINE, has commenced the *second* volume of a *new series.* It is published once a month, in quarto form of 32 pages to each monthly number, at $3 per annum *in advance.* The last volume may be had either stitched in a *cover*, so as to be sent by mail, or in boards. Price, *stitched*, $3 25; in boards, $3 50. *Each subscribea who pays in advance, or previous to the first of April, free of postage or commission, will be entitled to eight additional pages to each monthly number, or 96 extra pages to the volume.* Published at No. 35 Wall street, N.Y. D. K. MINOR, Proprietor.

Jan. 22, 1834.

A QUARTERLY JOURNAL OF AGRICULTURE AND MECHANICS will hereafter be published at the same office. Each quarterly number will contain about 300 large *octavo* pages, embracing the most *choice* articles from the best *agricultural* and *mechanical* publications both in America and Europe. It will form 2 volumes to the year, of about 640 pages each, and will be put up like other quarterly publications, so as to be sent by mail. Price, $5 per annum, in advance.

N. B. *A small edition only will be published.*

D. K. Minor also publishes the NEW-YORK AMERICAN, *daily, tri-weekly*, and *semi-weekly.*

Also, the PLOUGH-BOY, a cheap agricultural publication, *of eight quarto pages*, is issued once a week, at $1 50 per annum, *in advance.* It contains much interesting reading upon agriculture, &c.

☞ All Letters and Communications for the above publications, may be addressed, *free of postage*, to

D K. MINOR.

List of Subscribers to the Railroad Journal who have paid in advance to Jan. 1, 1835, *—continued from February* 8, 1834.

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